GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:54:17 ; Search time 519.273 Seconds
(without alignments)
604.496 Million cell updates/sec

Title: US-09-930-283A-1
Perfect score: 15
Sequence: 1 GTGCTCCATTGATGC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 708260

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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33: em_htgo_inv:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	15	100.0	15	6	AR110775	AR110775 Sequence
c 2	15	100.0	15	6	AR110777	AR110777 Sequence
3	15	100.0	15	6	AR167449	AR167449 Sequence
4	15	100.0	20	6	AR073978	AR073978 Sequence
5	15	100.0	25	6	AR110776	AR110776 Sequence
6	13	86.7	20	6	AR073933	AR073933 Sequence
7	13	86.7	20	6	AR105501	AR105501 Sequence
8	13	86.7	20	6	E49512	E49512 Antisense o
9	13	86.7	20	6	I27232	I27232 Sequence 2
c 10	12.4	82.7	20	6	AR037100	AR037100 Sequence
c 11	12.4	82.7	20	6	AR070338	AR070338 Sequence
12	12.4	82.7	20	6	AX294189	AX294189 Sequence
13	12.4	82.7	24	6	AX289556	AX289556 Sequence
14	12.4	82.7	27	6	AR039324	AR039324 Sequence
15	12	80.0	20	6	AR073934	AR073934 Sequence
c 16	12	80.0	20	6	AR106990	AR106990 Sequence
17	12	80.0	20	6	AR106991	AR106991 Sequence
18	12	80.0	20	6	E49513	E49513 Antisense o
19	12	80.0	20	6	I27233	I27233 Sequence 3
20	11.8	78.7	26	6	A16281	A16281 Oligonucleo
c 21	11.8	78.7	27	6	A16266	A16266 Oligonucleo
22	11.8	78.7	27	6	A16267	A16267 Oligonucleo
c 23	11.8	78.7	27	6	AR080410	AR080410 Sequence
c 24	11.8	78.7	27	6	AR092534	AR092534 Sequence
c 25	11.8	78.7	27	6	AR122889	AR122889 Sequence
c 26	11.8	78.7	27	6	AR123544	AR123544 Sequence
c 27	11.8	78.7	27	6	AR148361	AR148361 Sequence
28	11.8	78.7	30	6	AR069912	AR069912 Sequence
c 29	11.4	76.0	20	6	AR117463	AR117463 Sequence
c 30	11.4	76.0	20	6	AR117464	AR117464 Sequence
31	11.4	76.0	27	6	AR040292	AR040292 Sequence
32	11.4	76.0	29	6	I34997	I34997 Sequence 83
c 33	11.4	76.0	32	6	AX118830	AX118830 Sequence
c 34	11.4	76.0	32	6	I33123	I33123 Sequence 14
35	11.4	76.0	37	6	AX219955	AX219955 Sequence
36	11	73.3	20	6	AR073979	AR073979 Sequence
c 37	11	73.3	26	6	I81965	I81965 Sequence 4
38	11	73.3	26	6	I82041	I82041 Sequence 80
c 39	11	73.3	26	6	I91654	I91654 Sequence 4
40	11	73.3	26	6	I91729	I91729 Sequence 79
c 41	11	73.3	26	6	I91737	I91737 Sequence 87
c 42	11	73.3	36	6	AR079205	AR079205 Sequence
c 43	11	73.3	36	6	AR087480	AR087480 Sequence
c 44	11	73.3	36	6	I15210	I15210 Sequence 5
45	10.8	72.0	20	6	AR016146	AR016146 Sequence

ALIGNMENTS

RESULT 1
AR110775
LOCUS AR110775 15 bp DNA linear PAT 14-FEB-2001
DEFINITION Sequence 1 from patent US 6126965.
ACCESSION AR110775
VERSION AR110775.1 GI:12827623
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 15)
AUTHORS Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
TITLE Liposomes containing oligonucleotides
JOURNAL Patent: US 6126965-A 1 03-OCT-2000;
FEATURES Location/Qualifiers
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Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 GTGCTCCATTGATGC 15


RESULT 2
AR110777/c
LOCUS       AR110777                 15 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 3 from patent US 6126965.
ACCESSION   AR110777
VERSION     AR110777.1  GI:12827625
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
  TITLE     Liposomes containing oligonucleotides
  JOURNAL   Patent: US 6126965-A 3 03-OCT-2000;
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Db     15 GTGCTCCATTGATGC 1


RESULT 3
AR167449
LOCUS       AR167449                 15 bp    DNA     linear   PAT 17-DEC-2001
DEFINITION  Sequence 15 from patent US 6287591.
ACCESSION   AR167449
VERSION     AR167449.1  GI:17903229
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Semple,S.C., Klimuk,S.K., Harasym,T., Hope,M.J., Ansell,S.M.,
            Cullis,P., Scherrer,P. and Debeyer,D.
  TITLE     Charged therapeutic agents encapsulated in lipid particles
            containing four lipid components
  JOURNAL   Patent: US 6287591-A 15 11-SEP-2001;
FEATURES             Location/Qualifiers
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  Best Local Similarity  100.0%;  Pred. No. 4.2e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      1 GTGCTCCATTGATGC 15


RESULT 4
AR073978
LOCUS       AR073978                 20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 47 from patent US 5952229.
ACCESSION   AR073978
VERSION     AR073978.1  GI:10000738
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 47 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
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ORIGIN

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          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19


RESULT 5
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LOCUS       AR110776                 25 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 2 from patent US 6126965.
ACCESSION   AR110776
VERSION     AR110776.1  GI:12827624
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 25)
  AUTHORS   Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
  TITLE     Liposomes containing oligonucleotides
  JOURNAL   Patent: US 6126965-A 2 03-OCT-2000;
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Qy      1 GTGCTCCATTGATGC 15
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Db      8 GTGCTCCATTGATGC 22


RESULT 6
AR073933
LOCUS       AR073933                 20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 2 from patent US 5952229.
ACCESSION   AR073933
VERSION     AR073933.1  GI:10000693
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 2 14-SEP-1999;
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Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 7
AR105501
LOCUS       AR105501                  20 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 1 from patent US 6096720.
ACCESSION   AR105501
VERSION     AR105501.1  GI:12819098
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Love,W.Guy, Nicklin,P.Leslie, Hamilton,K.Ophelia and
            Phillips,J.Ann.
  TITLE     Liposomal oligonucleotide compositions
  JOURNAL   Patent: US 6096720-A 1 01-AUG-2000;
FEATURES             Location/Qualifiers
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BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

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Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 8
E49512
LOCUS       E49512                    20 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Antisense oligonucleotide regulation of raft gene expression.
ACCESSION   E49512
VERSION     E49512.1  GI:18628093
KEYWORDS    JP 2000152797-A/2.
SOURCE      Homo sapiens.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   P,M.B. and T,B.R.
  TITLE     Antisense oligonucleotide regulation of raft gene expression
  JOURNAL   Patent: JP 2000152797-A 2 06-JUN-2000;
            ISIS PHARMACEUTICALS INC
COMMENT     OS   Homo sapiens (human)
            PN   JP 2000152797-A/2
            PD   06-JUN-2000
            PF   18-JAN-2000 JP 2000008654
            PR   31-MAY-1994 US    08/250856
            PI   MONIA BURETTO P,BOGGUZU RUSSELL T
            PC   C12N15/09,A61K31/7088,A61K48/00,A61P17/06,A61P35/00,A61P43/00,
            PC   C12N15/00,A
            CC
            FH   Key             Location/Qualifiers
            FT   source          1. .20
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FEATURES             Location/Qualifiers
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                     /db_xref="taxon:9606"
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ORIGIN

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  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 9
I27232
LOCUS       I27232                    20 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 2 from patent US 5563255.
ACCESSION   I27232
VERSION     I27232.1  GI:1818008
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5563255-A 2 08-OCT-1996;
FEATURES             Location/Qualifiers
     source          1. .20
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BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

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  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 10
AR037100/c
LOCUS       AR037100                  20 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 7 from patent US 5801021.
ACCESSION   AR037100
VERSION     AR037100.1  GI:5954956
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,J.W., Collins,C., Pinkel,D., Kallioniemi,O.-P. and Tanner,M.M.
  TITLE     Amplifications of chromosomal region 20q13 as a prognostic
            indicator in breast cancer
  JOURNAL   Patent: US 5801021-A 7 01-SEP-1998;
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Db     17 TGCTCCATTGATTC 4


RESULT 11
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LOCUS       AR070338                  20 bp    DNA     linear   PAT 18-FEB-2000
DEFINITION  Sequence 15 from patent US 5892010.
ACCESSION   AR070338
VERSION     AR070338.1  GI:7221226
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KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,J., Collins,C., Hwang,S., Godfrey,T., Kowbel,D. and Rommens,J.
  TITLE     Genes from the 20Q13 amplicon and their uses
  JOURNAL   Patent: US 5892010-A 15 06-APR-1999;
FEATURES             Location/Qualifiers
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  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      2 TGCTCCATTGATGC 15
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Db     17 TGCTCCATTGATTC 4


RESULT 12
AX294189
LOCUS       AX294189                 20 bp    DNA     linear   PAT 21-NOV-2001
DEFINITION  Sequence 5951 from Patent WO0179548.
ACCESSION   AX294189
VERSION     AX294189.1  GI:17055872
KEYWORDS    .
SOURCE      synthetic construct.
  ORGANISM  synthetic construct
            artificial sequence.
REFERENCE   1  (sites)
  AUTHORS   Barany,F., Zirvi,M., Gerry,N.P., Favis,R. and Kliman,R.
  TITLE     Method of designing addressable array for detection of nucleic acid
            sequence differences using ligase detection reaction
  JOURNAL   Patent: WO 0179548-A 5951 25-OCT-2001;
            CORNELL RESEARCH FOUNDATION, INC. (US)
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Qy      2 TGCTCCATTGATGC 15
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Db      5 TGCGCCATTGATGC 18


RESULT 13
AX289556
LOCUS       AX289556                 24 bp    DNA     linear   PAT 21-NOV-2001
DEFINITION  Sequence 1318 from Patent WO0179548.
ACCESSION   AX289556
VERSION     AX289556.1  GI:17051239
KEYWORDS    .
SOURCE      synthetic construct.
  ORGANISM  synthetic construct
            artificial sequence.
REFERENCE   1  (sites)
  AUTHORS   Barany,F., Zirvi,M., Gerry,N.P., Favis,R. and Kliman,R.
  TITLE     Method of designing addressable array for detection of nucleic acid
            sequence differences using ligase detection reaction
  JOURNAL   Patent: WO 0179548-A 1318 25-OCT-2001;
            CORNELL RESEARCH FOUNDATION, INC. (US)
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Qy      2 TGCTCCATTGATGC 15
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Db      9 TGCGCCATTGATGC 22


RESULT 14
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LOCUS       AR039324                 27 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 172 from patent US 5807743.
ACCESSION   AR039324
VERSION     AR039324.1  GI:5958687
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 27)
  AUTHORS   Stinchcomb,D.T. and McSwiggen,J.A.
  TITLE     Interleukin-2 receptor gamma-chain ribozymes
  JOURNAL   Patent: US 5807743-A 172 15-SEP-1998;
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Db      1 GTGCTCCACTGATG 14


RESULT 15
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DEFINITION  Sequence 3 from patent US 5952229.
ACCESSION   AR073934
VERSION     AR073934.1  GI:10000694
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
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REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 3 14-SEP-1999;
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BASE COUNT        3 a      6 c      4 g      7 t
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Job time : 521.606 secs

GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:48:07 ; Search time 56.7273 Seconds
(without alignments)
453.992 Million cell updates/sec

Title: US-09-930-283A-1
Perfect score: 15
Sequence: 1 GTGCTCCATTGATGC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 1905168

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
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Listing first 45 summaries

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22: /SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA2001A.DAT:*
23: /SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA2001B.DAT:*
24: /SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	15	100.0	15	19	AAV54043	Human antisense c-
	2	15	100.0	15	20	AAV99435	Antisense oligonuc
	3	15	100.0	15	21	AAZ98661	Human c-raf-1 PK t
	4	15	100.0	15	24	AAD22797	Human c-raf-1 prot
	5	15	100.0	20	17	AAT27527	Mouse/rat c-raf st
	6	15	100.0	20	20	AAZ11557	Mouse and Rat c-ra
	7	15	100.0	20	21	AAA73535	Mouse and rat a-ra
c	8	13	86.7	17	20	AAV90935	Human C-raf target
	9	13	86.7	20	17	AAT27482	Human c-raf kinase
	10	13	86.7	20	18	AAT62145	Human c-raf and de
	11	13	86.7	20	18	AAT59716	Human raf inhibito
	12	13	86.7	20	20	AAZ11512	Human c-raf kinase
	13	13	86.7	20	21	AAA73490	Human c-raf kinase
c	14	12.4	82.7	20	18	AAX16583	Position FLpter 0.
c	15	12.4	82.7	20	18	AAX16555	Position FLpter 0.
c	16	12.4	82.7	20	19	AAV23613	Homo sapiens 20q13
	17	12.4	82.7	20	24	ABI94231	Capture oligonucle
	18	12.4	82.7	24	24	ABI85032	Capture oligonucle
c	19	12.4	82.7	24	24	ABI85033	Capture oligonucle
	20	12.4	82.7	27	19	AAV93971	Human IL-2 recepto
	21	12	80.0	20	17	AAT27483	Human c-raf kinase
c	22	12	80.0	20	19	AAT86617	Rat c-raf targeted
	23	12	80.0	20	20	AAZ11513	Human c-raf kinase
c	24	12	80.0	20	21	AAA92026	C-raf targeted sen
	25	12	80.0	20	21	AAA92027	C-raf targeted ant
	26	12	80.0	20	21	AAA73491	Human c-raf kinase
c	27	11.8	78.7	21	20	AAV82744	Degenerate PCR pri
c	28	11.8	78.7	29	12	AAQ12067	Initiation site of
	29	11.8	78.7	30	18	AAT58542	Snake venom erabut
c	30	11.8	78.7	33	22	AAI69852	Adeno-associated v
	31	11.8	78.7	41	24	AAI99803	Human seryl tRNA s
	32	11.8	78.7	41	24	AAI99804	Human seryl tRNA s
c	33	11.4	76.0	20	22	AAD18428	Human estrogen rec
c	34	11.4	76.0	20	22	AAC83066	Primer #2 for DNA
c	35	11.4	76.0	20	22	AAC83067	Primer #1 for ampl
c	36	11.4	76.0	24	21	AAA96304	PCR primer for cDN
	37	11.4	76.0	27	19	AAV94455	Canine IL-2 recept
	38	11.4	76.0	29	14	AAQ52122	Breast cancer spec
	39	11.4	76.0	29	20	AAA21836	Integrin subunit b
	40	11.4	76.0	29	21	AAF03474	Hammerhead ribozym
	41	11.4	76.0	29	21	AAF03922	Hammerhead ribozym
	42	11.4	76.0	31	19	AAV67945	Nucleotide fragmen
c	43	11.4	76.0	32	13	AAQ27952	CA55 primer 1. Sy
c	44	11.4	76.0	32	22	AAD03883	Maize CA55 promote
	45	11.4	76.0	36	19	AAV36074	Oligonucleotide SC

ALIGNMENTS

RESULT 1
AAV54043
ID AAV54043 standard; DNA; 15 BP.
XX
AC AAV54043;
XX
DT 02-DEC-1998 (first entry)
XX
DE Human antisense c-raf-1 oligodeoxyribonucleotide.
XX
KW Human; antisense; c-raf-1; oligodeoxyribonucleotide; ODN/oligo;
KW tumour tissue; cancer; radiation therapy; radiosensitise; antisense;
KW liposome carrier system; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT modified_base 1
FT /*tag= a
FT /note= "N-terminal base is phosphothioated"
FT modified_base 15
FT /*tag= b
FT /note= "C-terminal base is phosphothioated"
XX
PN WO9843095-A1.
XX
PD 01-OCT-1998.
XX
PF 19-MAR-1998; 98WO-US05303.
XX
PR 24-OCT-1997; 97US-0957327.
PR 21-MAR-1997; 97US-0041192.

XX
PA (GEOU) UNIV GEORGETOWN.
XX
PI Dritschilo A, Gokhale P, Kasid U, Rahman A;
XX
DR WPI; 1998-532155/45.
XX
PT New cationic liposome composition containing raf
PT oligodeoxynucleotide - can be used to directly target tumour tissue
PT and is useful in the radiation therapy of cancers
XX
PS Claim 4; Page 21; 25pp; English.
XX
CC This is the nucleotide sequence of the human antisense c-raf-1
CC oligodeoxyribonucleotide (ODN/oligo), used in the method of the
CC invention to directly target tumour tissue, and in cancer radiation
CC therapy. The products can be used in a method of radiosensitising
CC tumour tissue by addition of an antisense oligonucleotide of maximum
CC 40 bases containing ODN/oligo. The liposome carrier system directly
CC targets tumour tissue and has the potential for use in the radiation
CC therapy of cancers.
XX
SQ Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

Query Match 100.0%; Score 15; DB 19; Length 15;
Best Local Similarity 100.0%; Pred. No. 29;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GTGCTCCATTGATGC 15
||||||||||||||||
Db 1 GTGCTCCATTGATGC 15

RESULT 2
AAV99435
ID AAV99435 standard; DNA; 15 BP.
XX
AC AAV99435;
XX
DT 22-MAR-1999 (first entry)
XX
DE Antisense oligonucleotide directed against c-raf-1 protein kinase gene.
XX
KW Antisense oligonucleotide; human c-raf-1 protein kinase gene;
KW phosphorothioate; phosphodiester; lipid-encapsulation; tumour;
KW aberrant gene expression; treatment; inflammation; infection; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT modified_base 1..15
FT /*tag= a
FT /note= "phosphorothioate or phosphodiester bonds"
XX
PN WO9851278-A2.
XX
PD 19-NOV-1998.
XX
PF 14-MAY-1998; 98WO-CA00485.
XX
PR 14-MAY-1997; 97US-0856374.
XX
PA (INEX-) INEX PHARM CORP.
XX
PI Ansell SM, Cullis P, Debeyer D, Harasym T, Hope MJ;
PI Klimuk SK, Scherrer P, Semple SC;
XX
DR WPI; 1999-045179/04.
XX
PT Composition containing lipid-encapsulated therapeutic agent -
PT useful, e.g. for delivering antisense molecules or ribozymes or
PT treating diseases associated with aberrant gene expression
XX
PS Disclosure; Page 23; 98pp; English.
XX
CC The present sequence represents an antisense oligonucleotide directed
CC against the human c-raf-1 protein kinase gene. The oligonucleotide can
CC have either phosphorothioate or phosphodiester bonds. The oligonucleotide
CC is lipid-encapsulated using the method of the invention. A composition
CC comprising lipid-encapsulated particles of a therapeutic agent,
CC e.g. antisense oligonucleotides, is prepared by mixing at least 2 lipids
CC with buffered aqueous solution of charged therapeutic agent to form an
CC intermediate mixture of lipid-encapsulated particles, and changing the
CC pH of the mixture to neutralise at least some of the external surface
CC charges on the particles. One lipid has a (de)protonatable group with
CC Ka such that the lipid is charged at a first pH but neutral at a second
CC pH (particularly near physiological pH) and the buffer maintains this
CC lipid in the charged form (i.e. cationic when the therapeutic agent is
CC anionic in the buffer, or vice versa). The second lipid prevents particle
CC aggregation during formation of the lipid-therapeutic agent particles.
CC The composition is used to introduce therapeutic agents into cells,
CC in vivo or in vitro, particularly to treat or prevent diseases associated
CC with aberrant gene expression in mammals, specifically tumours,
CC inflammation or infection.
XX
SQ Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

Query Match 100.0%; Score 15; DB 20; Length 15;
Best Local Similarity 100.0%; Pred. No. 29;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GTGCTCCATTGATGC 15
||||||||||||||||
Db 1 GTGCTCCATTGATGC 15

RESULT 3
AAZ98661
ID AAZ98661 standard; DNA; 15 BP.
XX
AC AAZ98661;
XX
DT 05-JUN-2000 (first entry)
XX
DE Human c-raf-1 PK therapeutic antisense oligonucleotide sequence ATG-AS.
XX
KW Antisense oligonucleotide; phosphorothioate; inflammatory disease;
KW tumour; gene therapy; aberrant gene expression; treatment;
KW infectious disease; protein kinase C alpha; c-raf-1 protein kinase; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT misc_feature 1..15
FT /*tag= a
FT /note= "Optionally phosphorothioate internucleotide
FT linkages"
XX
PN CA2271582-A1.
XX
PD 14-NOV-1999.
XX
PF 13-MAY-1999; 99CA-2271582.
XX
PR 14-MAY-1998; 98US-0078955.
XX
PA (KLIM/) KLIMUK S K.
PA (HARA/) HARASYM T.
PA (HOPE/) HOPE M J.
PA (ANSE/) ANSELL S M.
PA (CULL/) CULLIS P R.
PA (MOKW/) MOK W W K.
PA (SCHE/) SCHERRER P.
PA (SEMP/) SEMPLE S C.
XX

```
PI   Klimuk SK,  Harasym T,  Hope MJ,  Ansell SM,  Cullis PR,  Mok WWK;
PI   Scherrer P,  Semple SC;
XX
DR   WPI; 2000-225058/20.
XX
PT   A method for delivering antisense oligonucleotides to cells using lipid
PT   capsules comprising steric barrier lipids -
XX
PS   Example 5; Page 57; 99pp; English.
XX
CC   This sequence represents an antisense oligonucleotide sequence which has
CC   human c-raf-1 protein kinase as its target gene. The oligonucleotide is
CC   used in a method for delivering lipid encapsulated therapeutic agents
CC   (i.e antisense oligonucleotides) to mammals. The lipid capsule comprises
CC   steric barrier lipids that prevent particle aggregation during lipid
CC   nucleic acid formation. The method may be used for the delivery of
CC   therapeutic agents to mammalian cells. It is especially suitable for
CC   delivering nucleic acid molecules, and in particular antisense molecules
CC   which may be administered to down regulate the expression of aberrant
CC   genes. The aberrant gene may be ICAM-1, c-myc, c-myb, ras, raf, erb-B-2,
CC   PKC-alpha, IGF-1R, EGFR, VEGF and/or VEG-R-1. The method may be used for
CC   the treatment of tumours, inflammatory diseases and/or infectious
CC   diseases.
XX
SQ   Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 21;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 29;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GTGCTCCATTGATGC 15
           |||||||||||||||
Db       1 GTGCTCCATTGATGC 15


RESULT 4
AAD22797
ID   AAD22797 standard; DNA; 15 BP.
XX
AC   AAD22797;
XX
DT   26-FEB-2002  (first entry)
XX
DE   Human c-raf-1 protein kinase antisense oligonucleotide, ATG-AS.
XX
KW   Treatment; tumour; lipid-therapeutic agent particle; sphingomyelin;
KW   distearoylphosphatidylcholine; palmitoyloleoyl phophatidylcholine;
KW   DSPC; POPC; 1,2-dioleoyl-sn-3-phosphoethanolamine; cholesterol; SM;
KW   DOPE; inflammation; c-raf-1 protein kinase gene;
KW   human; infectious disease; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base    1..20
FT                    /*tag= a
FT                    /mod_base= OTHER
FT                    /note= "Optionally phosphorothioate backbone"
XX
PN   US6287591-B1.
XX
PD   11-SEP-2001.
XX
PF   14-MAY-1998;   98US-0078954.
XX
PR   14-MAY-1997;   97US-0856374.
XX
PA   (INEX-) INEX PHARM CORP.
XX
PI   Semple SC,  Klimuk SK,  Harasym T,  Hope MJ,  Ansell SM,  Cullis P;
PI   Scherrer P,  Debeyer D;
XX
DR   WPI; 2002-024658/03.
XX
PT   Composition useful for treatment of e.g. tumors comprises particles
PT   comprising lipid portion and a charged therapeutic agent  -
XX
PS   Disclosure; Column 15-16; 48pp; English.
XX
CC   The invention relates to a composition useful for treatment of e.g.
CC   tumours. The composition comprises lipid-therapeutic agent particles
CC   comprising a lipid portion and a charged therapeutic agent which is
CC   encapsulated in the lipid portion. The lipid portion comprises a first
CC   lipid component selected from lipids containing a protonatable or
CC   deprotonatable (preferably protonatable) group that has a pKa such
CC   that the lipid is in charged form at a first pH and in neutral form at
CC   a second pH. The pKa of lipid component is from 4-11. The first lipid
CC   component is further selected such that the charged form is cationic
CC   when the therapeutic agent is anionic and vice versa; the second lipid
CC   component is selected from lipids that prevent particle aggregation
CC   during lipid-therapeutic agent particles formation and which exchange
CC   out the lipid particle at a rate greater than PEG-CerC20; third lipid
CC   component is a neutral lipid selected from distearoylphosphatidylcholine
CC   (DSPC), palmitoyloleoyl phophatidylcholine (POPC), 1,2-dioleoyl-sn-3-
CC   phosphoethanolamine (DOPE) or SM (sphingomyelin) and a fourth lipid
CC   component which is cholesterol. Compositions of the invention are used
CC   for treatment or prevention of a disease caused by aberrant expression
CC   of a gene preferably ICAM-1 (Intracellular adhesion molecule-1), c-myc,
CC   c-myb, ras, raf, erb-B-2, PKC-alpha (phosphokinase C-alpha), IGF-1R
CC   (insulin growth factor 1-receptor), bcl-2, EGFR (epidermal growth factor
CC   receptor), VEGF and VEGF-R-1 (vascular endothelial growth factor
CC   receptor 1) in a mammal or by inflammations such as tumour or an
CC   infectious disease. The present sequence is an antisense oligonucleotide
CC   targetted to human c-raf-1 protein kinase gene.
XX
SQ   Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 24;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 29;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GTGCTCCATTGATGC 15
           |||||||||||||||
Db       1 GTGCTCCATTGATGC 15


RESULT 5
AAT27527
ID   AAT27527 standard; DNA; 20 BP.
XX
AC   AAT27527;
XX
DT   04-JUL-1996  (first entry)
XX
DE   Mouse/rat c-raf start translation region antisense oligunucleotide.
XX
KW   Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW   psoriasis; restenosis; 3' untranslated region; ss.
XX
OS   Synthetic.
XX
PN   WO9532987-A1.
XX
PD   07-DEC-1995.
XX
PF   31-MAY-1995;   95WO-US07111.
XX
PR   31-MAY-1994;   94US-0250856.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1996-030518/03.
XX
PT   Oligo:nucleotide(s) targetted to nucleic acids encoding human raf  -
```

```
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Disclosure; Page 23; 65pp; English.
XX
CC   AAT27521-T27534 are antisense oligonucleotides against both rat and
CC   mouse c-raf kinase. They can be used for the inhibition of raf
CC   expression. The oligonucleotides (ONs) are targeted to either coding
CC   region, start signal or 5' or 3' untranslated region (UTR) mRNA
CC   encoding mouse/rat c-raf. The ONs are phosphorothioate linked. The ONs
CC   are used to inhibit expression of rat and mouse raf. The ONs can be
CC   used in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 17;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19


RESULT 6
AAZ11557
ID   AAZ11557 standard; DNA; 20 BP.
XX
AC   AAZ11557;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Mouse and Rat c-raf specific antisense oligo ISIS # 10711.
XX
KW   Mouse; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf; rat; antisense; ss.
XX
OS   Synthetic.
OS   Mus sp.
OS   Rattus sp.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Disclosure; Column 15; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences Z115511-564 represent antisense oligonucleotides for mouse and
CC   rat c-raf.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 20;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19


RESULT 7
AAA73535
ID   AAA73535 standard; DNA; 20 BP.
XX
AC   AAA73535;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Mouse and rat a-raf kinase antisense oligonucleotide #7 (Isis #10711).
XX
KW   c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; mouse; rat; ss.
XX
OS   Rattus rattus.
OS   Mus sp.
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis -
XX
PS   Disclosure; Column 14; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to mouse and rat c-raf genes, resulting in c-raf
CC   expression inhibition. The present sequence may be useful for treating
CC   and raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19
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RESULT 8
AAV90935/c
ID   AAV90935 standard; RNA; 17 BP.
XX
AC   AAV90935;
XX
DT   18-FEB-1999  (first entry)
XX
DE   Human C-raf target site nucleotide position 128.
XX
KW   Human; c-raf; A-raf; B-raf; hammerhead ribozyme; hairpin ribozyme;
KW   target; substrate; catalyst; modulation; expression; Raf gene;
KW   delivery; screening; identification; synthesis; deprotection;
KW   purification; cancer; inflammation; psoriasis; non-hepatic ascites;
KW   infection; genetic drift; restenosis; rheumatoid arthritis; ss.
XX
OS   Homo sapiens.
XX
PN   WO9850530-A2.
XX
PD   12-NOV-1998.
XX
PF   05-MAY-1998;   98WO-US09249.
XX
PR   19-DEC-1997;   97US-0068212.
PR   09-MAY-1997;   97US-0046059.
PR   09-JUN-1997;   97US-0049002.
PR   03-JUL-1997;   97US-0051718.
PR   22-AUG-1997;   97US-0056808.
PR   02-OCT-1997;   97US-0061321.
PR   02-OCT-1997;   97US-0061324.
PR   05-NOV-1997;   97US-0064866.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Beaudry A,  Beigelman L,  Bellon L,  Burgin A,  Jarvis T;
PI   Karpeisky A,  Kisich K,  Matulic-Adamic J,  McSwiggen JA;
PI   Parry T,  Reynolds M,  Sweedler D,  Thompson J,  Workman CT;
XX
DR   WPI; 1999-009494/01.
XX
PT   Identifying new catalytic nucleic acid that modulates selected
PT   processes - especially ribozymes that cleave Raf RNA for treating
PT   cancer, restenosis, and also new ribozymes and modified nucleoside
PT   triphosphates used as antiviral agents and synthons
XX
PS   Claim 177; Page 146; 259pp; English.
XX
CC   A method has been developed for the identification of a nucleic acid
CC   capable of modulating a process in a biological system. The method
CC   comprises: (a) introducing into the system a random library of nucleic
CC   acid catalysts (NAC) having a substrate binding domain (SBD), comprising
CC   a random sequence, and a catalytic domain (CD); and (b) identifying NAC
CC   in systems where modulation has occurred and/or determining the sequence
CC   of at least part of the SBDs in such systems. Nucleic acid molecules
CC   with endonuclease activity and catalytic activity, from the present
CC   invention, are used to modulate gene expression in plant and mammalian
CC   cells and to cleave target nucleic acid, particularly for treating
CC   systemic diseases caused by specific RNA, e.g. cancer, inflammation,
CC   psoriasis, non-hepatic ascites and infection. They may also be used to
CC   detect genetic drift and mutations in diseased cells and to determine
CC   c-raf RNA. Specifically NACs with RNA-cleaving activity that modulate
CC   expression of the Raf gene, are used to treat cancer, restenosis,
CC   psoriasis or rheumatoid arthritis, or generally any condition associated
CC   with the level of c-raf. Introduction of sugar/phosphate modifications
CC   increases stability against nuclease and activity. AAV90922 to AAV93877
CC   represent NACs that can be used in the method, specifically for
CC   modulating the expression of a Raf gene.
XX
SQ   Sequence 17 BP; 5 A; 4 C; 5 G; 3 U; 0 other;

  Query Match             86.7%;  Score 13;  DB 20;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 4.2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3 GCTCCATTGATGC 15
           |||||||||||||
Db      17 GCTCCATTGATGC 5


RESULT 9
AAT27482
ID   AAT27482 standard; DNA; 20 BP.
XX
AC   AAT27482;
XX
DT   04-JUL-1996  (first entry)
XX
DE   Human c-raf kinase translation start site antisense oligonucleotide.
XX
KW   Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW   phosphorothioate; 2' sugar modification; psoriasis; restenosis; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..20
FT                   /*tag=  a
FT                   /note= "opt. phosphorothioate linked"
FT   misc_feature    1..20
FT                   /*tag=  b
FT                   /note= "all bases opt. contain 2'-O-methyl
FT                          or 2'-O-propyl sugar modifications"
XX
PN   WO9532987-A1.
XX
PD   07-DEC-1995.
XX
PF   31-MAY-1995;   95WO-US07111.
XX
PR   31-MAY-1994;   94US-0250856.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1996-030518/03.
XX
PT   Oligo:nucleotide(s) targetted to nucleic acids encoding human raf  -
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Claim 10; Page 15; 65pp; English.
XX
CC   AAT27481-T27507 are human c-raf kinase antisense oligonucleotides used
CC   for the inhibition of raf expression. The oligonucleotides (ONs) are
CC   targeted to either coding region, start or stop signal or 5' or 3'
CC   untranslated region (UTR) mRNA encoding human c-raf. The ONs may be
CC   phosphorothioate linked and may contain modifications at the 2'
CC   position of the sugar moiety. ONs are pref. complementary to either
CC   3' or 5' UTRs, phosphorothioate linked and contain 2'-O-alkyl sugar
CC   modifications. The ONs are used to inhibit expression of human raf
CC   in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 17;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3 GCTCCATTGATGC 15
           |||||||||||||
Db       1 GCTCCATTGATGC 13
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RESULT 10
AAT62145
ID   AAT62145 standard; DNA; 20 BP.
XX
AC   AAT62145;
XX
DT   01-DEC-1997  (first entry)
XX
DE   Human c-raf and dextran sulphate mRNA targetting oligonucleotide ON1.
XX
KW   Cancer; anionic polysaccharide; human; lung cancer; stomach cancer;
KW   renal cancer; breast cancer; laryngeal cancer; pancreatic cancer;
KW   colorectal cancer; malignant melanoma; tumour; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..20
FT                   /*tag=  a
FT                   /note= "Phosphorothioate backbone; optionally being
FT                          uniformly substituted at the 2'-position of the
FT                          sugar moiety by a methoxy group"
XX
PN   WO9710829-A1.
XX
PD   27-MAR-1997.
XX
PF   12-SEP-1996;   96WO-GB02245.
XX
PR   19-SEP-1995;   95GB-0019109.
XX
PA   (NOVS ) NOVARTIS AG.
PA   (CIBA ) CIBA GEIGY AG.
XX
PI   Nicklin PL,  Steward A;
XX
DR   WPI; 1997-202610/18.
XX
PT   Composition for cancer treatment  - comprising anionic
PT   polysaccharide, and oligo:nucleotide targeted to mRNA encoding
PT   human c-raf and dextran sulphate
XX
PS   Claim 16; Page 14; 21pp; English.
XX
CC   A pharmaceutical composition has been developed comprising an
CC   oligonucleotide, targeted to human raf encoding mRNA, and an anionic
CC   polysaccharide. The present sequence represents a specifically claimed
CC   oligonucleotide for use in the composition. The composition can be
CC   used to treat mammalian cancer, especially human lung, stomach, renal,
CC   breast, laryngeal, pancreatic or colorectal cancer, or malignant
CC   melanoma. The anionic polysaccharide increases tumour uptake of the
CC   oligonucleotide, particularly an oligonucleotide targeted to human raf
CC   encoding mRNA.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 18;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 11
AAT59716
ID   AAT59716 standard; DNA; 20 BP.
XX
AC   AAT59716;
XX
DT   06-OCT-1997  (first entry)
XX
DE   Human raf inhibitor oligonucleotide ON1.
XX
KW   raf; inhibitor; antisense; liposome; cancer; abnormal expression;
KW   anti-hyperproliferative; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag=  a
FT                   /note= "phosphorothioate backbone linkages"
XX
PN   WO9704787-A1.
XX
PD   13-FEB-1997.
XX
PF   24-JUL-1996;   96WO-GB01775.
XX
PR   19-SEP-1995;   95GB-0019130.
PR   01-AUG-1995;   95GB-0015743.
XX
PA   (CIBA ) CIBA GEIGY AG.
XX
PI   Hamilton KO,  Love WG,  Nicklin PL,  Phillips JA;
XX
DR   WPI; 1997-145363/13.
XX
PT   Inhibiting human raf expression, partic. for treating cancer  -
PT   using an oligonucleotide targeted to mRNA encoding human raf
PT   entrapped in sterically stabilised liposome(s)
XX
PS   Claim 16; Page 18; 27pp; English.
XX
CC   T59716-28 are preferred oligonucleotides which are targeted to mRNA
CC   encoding human raf and are capable of inhibiting raf expression.
CC   Compositions containing the oligonucleotides entrapped in sterically
CC   stabilised liposomes are claimed. The compsns. can be used for inhibiting
CC   the expression of human raf. They can be used for the treatment of
CC   mammalian cancer, partic. human cancer e.g. lung, stomach, renal, breast,
CC   laryngeal, pancreatic, colorectal cancer and malignant melanoma. In
CC   particular the compsns. can inhibit abnormal raf expression and retain
CC   anti-hyperproliferative activity after prolonged circulation in the
CC   bloodstream. They facilitate the reduction of accumulation of ONs in
CC   non-target organs and a reduction of acute and chronic side effects
CC   during prolonged treatment. ON1-10 are oligodeoxynucleotides with
CC   phosphorothioate backbones designed using the Genbank c-raf sequence
CC   HUMRAFR. ON1 is targeted to the translation initiation site.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 18;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 12
AAZ11512
ID   AAZ11512 standard; DNA; 20 BP.
XX
AC   AAZ11512;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Human c-raf kinase antisense oligo ISIS # 5074.
XX
KW   Human; raf; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf kinase; antisense; ss.
```

```
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Claim 1; Column 9; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences AAZ11511-537 and AAZ11565-573 represent antisense
CC   oligonucleotides for human c-raf kinase.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 20;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3 GCTCCATTGATGC 15
           |||||||||||||
Db       1 GCTCCATTGATGC 13


RESULT 13
AAA73490
ID   AAA73490 standard; DNA; 20 BP.
XX
AC   AAA73490;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Human c-raf kinase antisense oligonucleotide #2 (Isis #5074,#7835,#7843).
XX
KW   Human; c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag= a
FT                   /mod_base= OTHER
FT                   /note= "All or some nucleotides are optionally with
FT                   2'-methoxyethoxy, or 2'-O-propyl modification. Also,
FT                   optionally phosphodiester or phosphothioate backbone"
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis  -
XX
PS   Claim 31; Column 9; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to human c-raf gene, resulting in c-raf expression
CC   inhibition. The present sequence may be useful for treating and
CC   raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3 GCTCCATTGATGC 15
           |||||||||||||
Db       1 GCTCCATTGATGC 13


RESULT 14
AAX16583/c
ID   AAX16583 standard; DNA; 20 BP.
XX
AC   AAX16583;
XX
DT   26-APR-1999  (first entry)
XX
DE   Position FLpter 0.825 chromosome abnormality PCR forward primer #18.
XX
KW   Human chromosome 20; position FLpter 0.825; chromosome abnormality;
KW   PCR primer; probe; hybridisation; detection; breast cancer; tumour;
KW   ovary; bladder; head; neck; colon; comparative genome hybridisation; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9714811-A1.
XX
PD   24-APR-1997.
XX
PF   07-OCT-1996;   96WO-US16085.
XX
PR   20-OCT-1995;   95US-0546130.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Collins C,  Gray JW,  Kallioniemi O,  Pinkel D,  Tanner MM;
XX
```

```
DR   WPI; 1997-245126/22.
XX
PT   Detection of abnormalities on human chromosome 20 at position 20q13
PT   - is useful as indicator of presence of, e.g. primary breast tumours
XX
PS   Claim 2; Page 15; 40pp; English.
XX
CC   A method has been developed for detecting chromosomal abnormalities at
CC   about position FLpter 0.825 on the human chromosome 20. The method
CC   comprises: (i) contacting a chromosomal sample from a patient with at
CC   least 1 labelled probe, which binds to a target sequence at about
CC   position FLpter 0.825 on the human chromosome 20; and (ii) detecting the
CC   binding of the probes to the target sequence. AAX16549 to AAX16586
CC   represent nucleic acid sequences to which the probes can hybridise. These
CC   nucleic acid sequences also represent PCR primers. The probes and method
CC   can be used to detect genomic amplifications in the 20q13 (especially
CC   the 20q13.2) amplicon, which is associated and indicative of the presence
CC   of a large number of cancers, e.g. primary tumours of breast, ovary,
CC   bladder, head and neck and colon cancers. The method uses the technique
CC   of comparative genome hybridisation (CGH) which is able to reveal
CC   amplifications and deletions in genomic chromosomes irrespective of
CC   genome rearrangements. However CGH also provides a more quantitative
CC   estimate of copy number than, e.g. Southern hybridisation, and also
CC   provides the localisation of the amplified or deleted region in a normal
CC   chromosome. Fluorescent in situ hybridisation was further performed
CC   using locus specific probes to confirm the CGH data and to precisely
CC   map the region of the amplification.
XX
SQ   Sequence 20 BP; 9 A; 2 C; 5 G; 4 T; 0 other;

  Query Match             82.7%;  Score 12.4;  DB 18;  Length 20;
  Best Local Similarity   92.9%;  Pred. No. 9.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       2 TGCTCCATTGATGC 15
           ||||||||||||| |
Db      17 TGCTCCATTGATTC 4


RESULT 15
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ID   AAX16555 standard; DNA; 20 BP.
XX
AC   AAX16555;
XX
DT   26-APR-1999  (first entry)
XX
DE   Position FLpter 0.825 chromosome abnormality PCR forward primer #4.
XX
KW   Human chromosome 20; position FLpter 0.825; chromosome abnormality;
KW   PCR primer; probe; hybridisation; detection; breast cancer; tumour;
KW   ovary; bladder; head; neck; colon; comparative genome hybridisation; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9714811-A1.
XX
PD   24-APR-1997.
XX
PF   07-OCT-1996;   96WO-US16085.
XX
PR   20-OCT-1995;   95US-0546130.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Collins C,  Gray JW,  Kallioniemi O,  Pinkel D,  Tanner MM;
XX
DR   WPI; 1997-245126/22.
XX
PT   Detection of abnormalities on human chromosome 20 at position 20q13
PT   - is useful as indicator of presence of, e.g. primary breast tumours
XX
PS   Claim 2; Page 14; 40pp; English.
XX
CC   A method has been developed for detecting chromosomal abnormalities at
CC   about position FLpter 0.825 on the human chromosome 20. The method
CC   comprises: (i) contacting a chromosomal sample from a patient with at
CC   least 1 labelled probe, which binds to a target sequence at about
CC   position FLpter 0.825 on the human chromosome 20; and (ii) detecting the
CC   binding of the probes to the target sequence. AAX16549 to AAX16586
CC   represent nucleic acid sequences to which the probes can hybridise. These
CC   nucleic acid sequences also represent PCR primers. The probes and method
CC   can be used to detect genomic amplifications in the 20q13 (especially
CC   the 20q13.2) amplicon, which is associated and indicative of the presence
CC   of a large number of cancers, e.g. primary tumours of breast, ovary,
CC   bladder, head and neck and colon cancers. The method uses the technique
CC   of comparative genome hybridisation (CGH) which is able to reveal
CC   amplifications and deletions in genomic chromosomes irrespective of
CC   genome rearrangements. However CGH also provides a more quantitative
CC   estimate of copy number than, e.g. Southern hybridisation, and also
CC   provides the localisation of the amplified or deleted region in a normal
CC   chromosome. Fluorescent in situ hybridisation was further performed
CC   using locus specific probes to confirm the CGH data and to precisely
CC   map the region of the amplification.
XX
SQ   Sequence 20 BP; 9 A; 2 C; 5 G; 4 T; 0 other;

  Query Match             82.7%;  Score 12.4;  DB 18;  Length 20;
  Best Local Similarity   92.9%;  Pred. No. 9.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       2 TGCTCCATTGATGC 15
           ||||||||||||| |
Db      17 TGCTCCATTGATTC 4


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Job time : 57.7273 secs
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GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 24, 2002, 01:05:22 ; Search time 20.4545 Seconds
(without alignments)
180.131 Million cell updates/sec

Title: US-09-930-283A-1
Perfect score: 15
Sequence: 1 GTGCTCCATTGATGC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 543772

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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	1	15	100.0	15	3	US-08-957-327-1	Sequence 1, Appli
c	2	15	100.0	15	3	US-08-957-327-3	Sequence 3, Appli
	3	15	100.0	15	4	US-09-078-954-15	Sequence 15, Appl
	4	15	100.0	15	4	US-09-482-084-1	Sequence 1, Appli
c	5	15	100.0	15	4	US-09-482-084-3	Sequence 3, Appli
	6	15	100.0	20	2	US-08-756-806A-47	Sequence 47, Appl
	7	15	100.0	20	3	US-09-143-214-47	Sequence 47, Appl
	8	15	100.0	20	5	PCT-US95-07111A-47	Sequence 47, Appl
	9	15	100.0	25	3	US-08-957-327-2	Sequence 2, Appli
	10	15	100.0	25	4	US-09-482-084-2	Sequence 2, Appli
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c	17	12.4	82.7	20	2	US-08-680-395-15	Sequence 15, Appl
c	18	12.4	82.7	20	4	US-09-066-641-4	Sequence 4, Appli
c	19	12.4	82.7	20	4	US-09-066-641-18	Sequence 18, Appl
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	22	12	80.0	20	2	US-08-756-806A-3	Sequence 3, Appli
	23	12	80.0	20	3	US-09-143-214-3	Sequence 3, Appli
c	24	12	80.0	20	3	US-08-870-608-5	Sequence 5, Appli
	25	12	80.0	20	3	US-08-870-608-6	Sequence 6, Appli
	26	12	80.0	20	5	PCT-US95-07111A-3	Sequence 3, Appli
c	27	11.8	78.7	27	2	US-08-467-963C-12	Sequence 12, Appl
c	28	11.8	78.7	27	2	US-08-838-189D-12	Sequence 12, Appl
c	29	11.8	78.7	27	3	US-08-852-344D-12	Sequence 12, Appl
c	30	11.8	78.7	27	3	US-08-344-639E-12	Sequence 12, Appl
c	31	11.8	78.7	27	4	US-08-467-969A-12	Sequence 12, Appl
c	32	11.8	78.7	27	4	US-08-467-961A-12	Sequence 12, Appl
c	33	11.8	78.7	27	4	US-08-001-554A-12	Sequence 12, Appl
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c	35	11.4	76.0	20	3	US-08-790-659-4	Sequence 4, Appli
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	37	11.4	76.0	27	1	US-08-758-306-1140	Sequence 1140, Ap
	38	11.4	76.0	29	1	US-08-435-350-83	Sequence 83, Appl
c	39	11.4	76.0	32	1	US-08-104-073-14	Sequence 14, Appl
	40	11.4	76.0	36	4	US-09-254-733-48	Sequence 48, Appl
	41	11	73.3	20	2	US-08-756-806A-48	Sequence 48, Appl
	42	11	73.3	20	3	US-09-143-214-48	Sequence 48, Appl
	43	11	73.3	20	5	PCT-US95-07111A-48	Sequence 48, Appl
c	44	11	73.3	26	1	US-08-485-602-4	Sequence 4, Appli
	45	11	73.3	26	1	US-08-485-602-80	Sequence 80, Appl

ALIGNMENTS

RESULT 1
US-08-957-327-1
; Sequence 1, Application US/08957327
; Patent No. 6126965
; GENERAL INFORMATION:
; APPLICANT: Kasid, Usha
; APPLICANT: Gokhale, Prafulla
; APPLICANT: Dritschilo, Anatoly
; APPLICANT: Rahman, Aqlur
; TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hendricks and Assoc.
; STREET: P.O. Box 2509
; CITY: Fairfax
; STATE: VA
; COUNTRY: US
; ZIP: 22031
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/957,327
; FILING DATE: 24-OCT-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Hendricks, Glenna
; REGISTRATION NUMBER: 32,535
; REFERENCE/DOCKET NUMBER: kasid
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 591-4470
; TELEFAX: (703) 591-4428
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 15 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: unknown
; MOLECULE TYPE: DNA (genomic)
; HYPOTHETICAL: NO
; ANTI-SENSE: YES
US-08-957-327-1

Query Match 100.0%; Score 15; DB 3; Length 15;
Best Local Similarity 100.0%; Pred. No. 4.3;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GTGCTCCATTGATGC 15

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          ||||||||||||||||
Db      1 GTGCTCCATTGATGC 15


RESULT 2
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; Sequence 3, Application US/08957327
; Patent No. 6126965
;  GENERAL INFORMATION:
;    APPLICANT:  Kasid, Usha
;    APPLICANT:  Gokhale, Prafulla
;    APPLICANT:  Dritschilo, Anatoly
;    APPLICANT:  Rahman, Aqulur
;    TITLE OF INVENTION:  Liposomes contaiing Oligonucelotides
;    NUMBER OF SEQUENCES:  3
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hendricks and Assoc.
;      STREET:  P.O. Box 2509
;      CITY:  Fairfax
;      STATE:  VA
;      COUNTRY:  US
;      ZIP:  22031
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/957,327
;      FILING DATE:  24-OCT-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hendricks, Glenna
;      REGISTRATION NUMBER:  32,535
;      REFERENCE/DOCKET NUMBER:  kasid
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 591-4470
;      TELEFAX:  (703) 591-4428
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  YES
US-08-957-327-3

  Query Match             100.0%;  Score 15;  DB 3;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          ||||||||||||||||
Db     15 GTGCTCCATTGATGC 1


RESULT 3
US-09-078-954-15
; Sequence 15, Application US/09078954
; Patent No. 6287591
;  GENERAL INFORMATION:
;    APPLICANT:  SEMPLE, Sean C.
;    APPLICANT:  Klimuk, Sandra K.
;    APPLICANT:  Harasym, Troy
;    APPLICANT:  Hope, Michael J.
;    APPLICANT:  Ansell, Steven M.
;    APPLICANT:  Cullis, Pieter
;    APPLICANT:  Scherrer, Peter
;    APPLICANT:  Geiser, Timothy
;    APPLICANT:  Zon, Gerald
;    APPLICANT:  Debeyer, Dan
;    TITLE OF INVENTION:  High Efficiency Encapsulation of Charged Therapeutic Agents
;    TITLE OF INVENTION:  Lipid Vesicles
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oppedahl & Larson
;      STREET:  PO Box 5270
;      CITY:  Frisco
;      STATE:  CO
;      COUNTRY:  USA
;      ZIP:  80443-5270
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 Mb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS 5.0
;      SOFTWARE:  Word Perfect
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/078,954
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/856,374
;      FILING DATE:  14-MAY-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Marina T. Larson
;      REGISTRATION NUMBER:  32,038
;      REFERENCE/DOCKET NUMBER:  INEX.P-003
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (970) 668-2050
;      TELEFAX:  (970) 668-2082
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
;    HYPOTHETICAL:  no
;    ANTI-SENSE:  yes
US-09-078-954-15

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          ||||||||||||||||
Db      1 GTGCTCCATTGATGC 15


RESULT 4
US-09-482-084-1
; Sequence 1, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
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;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 1:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 15 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-482-084-1

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      1 GTGCTCCATTGATGC 15


RESULT 5
US-09-482-084-3/c
; Sequence 3, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 3:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 15 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-482-084-3

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db     15 GTGCTCCATTGATGC 1


RESULT 6
US-08-756-806A-47
; Sequence 47, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/756,806A
;      FILING DATE:  No. 5952229ember 26, 1996
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-756-806A-47

  Query Match             100.0%;  Score 15;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
```

```
Db      5 GTGCTCCATTGATGC 19


RESULT 7
US-09-143-214-47
; Sequence 47, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/143,214
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/756,806
;      FILING DATE:  No. 6090626ember 26, 1996
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-09-143-214-47

  Query Match             100.0%;  Score 15;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19


RESULT 8
PCT-US95-07111A-47
; Sequence 47, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-47

  Query Match             100.0%;  Score 15;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      5 GTGCTCCATTGATGC 19


RESULT 9
US-08-957-327-2
; Sequence 2, Application US/08957327
; Patent No. 6126965
;  GENERAL INFORMATION:
;    APPLICANT:  Kasid, Usha
;    APPLICANT:  Gokhale, Prafulla
;    APPLICANT:  Dritschilo, Anatoly
;    APPLICANT:  Rahman, Aqulur
;    TITLE OF INVENTION:  Liposomes contaiing Oligonucelotides
;    NUMBER OF SEQUENCES:  3
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hendricks and Assoc.
;      STREET:  P.O. Box 2509
;      CITY:  Fairfax
;      STATE:  VA
;      COUNTRY:  US
;      ZIP:  22031
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/957,327
;      FILING DATE:  24-OCT-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hendricks, Glenna
;      REGISTRATION NUMBER:  32,535
;      REFERENCE/DOCKET NUMBER:  kasid
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 591-4470
```

```
;      TELEFAX:  (703) 591-4428
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  25 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  YES
US-08-957-327-2

  Query Match             100.0%;  Score 15;  DB 3;  Length 25;
  Best Local Similarity   100.0%;  Pred. No. 4.7;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      8 GTGCTCCATTGATGC 22


RESULT 10
US-09-482-084-2
; Sequence 2, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 2:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 25 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-482-084-2

  Query Match             100.0%;  Score 15;  DB 4;  Length 25;
  Best Local Similarity   100.0%;  Pred. No. 4.7;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GTGCTCCATTGATGC 15
          |||||||||||||||
Db      8 GTGCTCCATTGATGC 22


RESULT 11
US-08-250-856A-2
; Sequence 2, Application US/08250856A
; Patent No. 5563255
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  39
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/250,856A
;      FILING DATE:  May 31, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0094
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-250-856A-2

  Query Match             86.7%;  Score 13;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 12
US-08-756-806A-2
; Sequence 2, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
```

```
;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/756,806A
;       FILING DATE:  No. 5952229ember 26, 1996
;       CLASSIFICATION:  536
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-08-756-806A-2

  Query Match             86.7%;  Score 13;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 13
US-09-143-214-2
; Sequence 2, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;     APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;     TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;     TITLE OF INVENTION:  of raf Gene Expression
;     NUMBER OF SEQUENCES:  65
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Law Offices of Jane Massey Licata
;       STREET:  66 East Main Street
;       CITY:  Marlton
;       STATE:  NJ
;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/143,214
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/756,806
;       FILING DATE:  No. 6090626ember 26, 1996
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-09-143-214-2

  Query Match             86.7%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 14
US-09-000-136-1
; Sequence 1, Application US/09000136
; Patent No. 6096720
; GENERAL INFORMATION:
;  APPLICANT: Love, William G
;  APPLICANT: Sharman, Thomas
;  APPLICANT: Phillips, Judith A
;  APPLICANT: Nicklin, Paul L
;  APPLICANT: Hamilton, Karen O
;  TITLE OF INVENTION: Liposomal Oligonucleotide Compositions
;  FILE REFERENCE: 4-20536/A/MA 2112
;  CURRENT APPLICATION NUMBER: US/09/000,136
;  CURRENT FILING DATE: 1998-04-23
;  EARLIER APPLICATION NUMBER: GB 9515743.4
;  EARLIER FILING DATE: 1995-08-01
;  NUMBER OF SEQ ID NOS: 25
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:oligonucleotide
;   FEATURE:
;   OTHER INFORMATION: phosphorothioate backbones
;   FEATURE:
;   OTHER INFORMATION: alternative oligonucleotide prepared with methoxy
;   OTHER INFORMATION: group substituting 2' sugar moiety
US-09-000-136-1

  Query Match             86.7%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      3 GCTCCATTGATGC 15
          |||||||||||||
Db      1 GCTCCATTGATGC 13


RESULT 15
PCT-US95-07111A-2
; Sequence 2, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;     APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;     TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
```

```
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-2

  Query Match             86.7%;  Score 13;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3 GCTCCATTGATGC 15
           |||||||||||||
Db       1 GCTCCATTGATGC 13


Search completed: October 24, 2002, 06:24:44
Job time : 23.4545 secs
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GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:54:17 ; Search time 865.455 Seconds
(without alignments)
604.496 Million cell updates/sec

Title: US-09-930-283A-2
Perfect score: 25
Sequence: 1 CCTGTATGTGCTCCATTGATGCAGC 25

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 708260

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
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6: gb_pat:*
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8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
18: em_in:*
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29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htgo_inv:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description
1	25	100.0	25	6	AR110776	AR110776 Sequence
2	20	80.0	20	6	AR073978	AR073978 Sequence
3	19	76.0	20	6	AR073934	AR073934 Sequence
c 4	19	76.0	20	6	AR106990	AR106990 Sequence
5	19	76.0	20	6	AR106991	AR106991 Sequence
6	19	76.0	20	6	E49513	E49513 Antisense o
7	19	76.0	20	6	I27233	I27233 Sequence 3
8	18	72.0	20	6	AR073979	AR073979 Sequence
c 9	16.4	65.6	40	6	AR100922	AR100922 Sequence
c 10	16.4	65.6	40	6	AR100937	AR100937 Sequence
11	16	64.0	20	6	AR073933	AR073933 Sequence
12	16	64.0	20	6	AR105501	AR105501 Sequence
c 13	16	64.0	20	6	AX224889	AX224889 Sequence
14	16	64.0	20	6	AX224890	AX224890 Sequence
15	16	64.0	20	6	E49512	E49512 Antisense o
16	16	64.0	20	6	I27232	I27232 Sequence 2
c 17	15.4	61.6	27	6	I04701	I04701 Sequence 25
c 18	15.2	60.8	42	6	AR061629	AR061629 Sequence
c 19	15.2	60.8	42	6	AR108528	AR108528 Sequence
c 20	15.2	60.8	42	6	I16485	I16485 Sequence 31
c 21	15.2	60.8	42	6	I66971	I66971 Sequence 31
c 22	15.2	60.8	42	6	I85065	I85065 Sequence 31
23	15	60.0	15	6	AR110775	AR110775 Sequence
c 24	15	60.0	15	6	AR110777	AR110777 Sequence
25	15	60.0	15	6	AR167449	AR167449 Sequence
26	14.6	58.4	33	6	AX354657	AX354657 Sequence
27	14.6	58.4	33	6	AX354659	AX354659 Sequence
28	14.2	56.8	31	6	AX100920	AX100920 Sequence
c 29	14.2	56.8	41	6	AR061611	AR061611 Sequence
c 30	14.2	56.8	41	6	AR108510	AR108510 Sequence
c 31	14.2	56.8	41	6	I16467	I16467 Sequence 29
c 32	14.2	56.8	41	6	I66953	I66953 Sequence 29
c 33	14.2	56.8	41	6	I85047	I85047 Sequence 29
34	14	56.0	23	6	AX116331	AX116331 Sequence
c 35	14	56.0	31	6	AX248818	AX248818 Sequence
36	13.8	55.2	30	6	AR069912	AR069912 Sequence
c 37	13.8	55.2	47	6	AX085814	AX085814 Sequence
38	13.6	54.4	36	6	A47696	A47696 Sequence 4
39	13.6	54.4	37	6	AR052447	AR052447 Sequence
40	13.6	54.4	37	6	AR082435	AR082435 Sequence
41	13.6	54.4	37	6	E08397	E08397 PCR primer
c 42	13.6	54.4	48	6	AR019499	AR019499 Sequence
43	13.6	54.4	48	6	AR019500	AR019500 Sequence
44	13.4	53.6	20	6	AX294189	AX294189 Sequence
45	13.4	53.6	24	6	AX289556	AX289556 Sequence

ALIGNMENTS

RESULT 1
AR110776
LOCUS AR110776 25 bp DNA linear PAT 14-FEB-2001
DEFINITION Sequence 2 from patent US 6126965.
ACCESSION AR110776
VERSION AR110776.1 GI:12827624
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 25)
AUTHORS Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
TITLE Liposomes containing oligonucleotides
JOURNAL Patent: US 6126965-A 2 03-OCT-2000;
FEATURES Location/Qualifiers
source 1. .25
/organism="unknown"
BASE COUNT 4 a 7 c 6 g 8 t
ORIGIN

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Best Local Similarity 100.0%; Pred. No. 0.079;
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 CCTGTATGTGCTCCATTGATGCAGC 25


RESULT 2
AR073978
LOCUS       AR073978                  20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 47 from patent US 5952229.
ACCESSION   AR073978
VERSION     AR073978.1  GI:10000738
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 47 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        4 a      4 c      5 g      7 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 33;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      4 GTATGTGCTCCATTGATGCA 23
          ||||||||||||||||||||
Db      1 GTATGTGCTCCATTGATGCA 20


RESULT 3
AR073934
LOCUS       AR073934                  20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 3 from patent US 5952229.
ACCESSION   AR073934
VERSION     AR073934.1  GI:10000694
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 3 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        3 a      6 c      4 g      7 t
ORIGIN

  Query Match            76.0%;  Score 19;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 1.1e+02;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 4
AR106990/c
LOCUS       AR106990                  20 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 5 from patent US 6107094.
ACCESSION   AR106990
VERSION     AR106990.1  GI:12821520
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Crooke,S.T.
  TITLE     Oligoribonucleotides and ribonucleases for cleaving RNA
  JOURNAL   Patent: US 6107094-A 5 22-AUG-2000;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        7 a      4 c      6 g      3 t
ORIGIN

  Query Match            76.0%;  Score 19;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 1.1e+02;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db     19 CCTGTATGTGCTCCATTGA 1


RESULT 5
AR106991
LOCUS       AR106991                  20 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 6 from patent US 6107094.
ACCESSION   AR106991
VERSION     AR106991.1  GI:12821521
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Crooke,S.T.
  TITLE     Oligoribonucleotides and ribonucleases for cleaving RNA
  JOURNAL   Patent: US 6107094-A 6 22-AUG-2000;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        3 a      6 c      4 g      7 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 1.1e+02;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
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Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 6
E49513
LOCUS       E49513                    20 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Antisense oligonucleotide regulation of raft gene expression.
ACCESSION   E49513
VERSION     E49513.1  GI:18628094
KEYWORDS    JP 2000152797-A/3.
SOURCE      Homo sapiens.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   P,M.B. and T,B.R.
  TITLE     Antisense oligonucleotide regulation of raft gene expression
  JOURNAL   Patent: JP 2000152797-A 3 06-JUN-2000;
            ISIS PHARMACEUTICALS INC
COMMENT     OS   Homo sapiens (human)
            PN   JP 2000152797-A/3
            PD   06-JUN-2000
            PF   18-JAN-2000 JP 2000008654
            PR   31-MAY-1994 US    08/250856
            PI   MONIA BURETTO P,BOGGUZU RUSSELL T
            PC   C12N15/09,A61K31/7088,A61K48/00,A61P17/06,A61P35/00,A61P43/00,
            PC   C12N15/00,A
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            FH   Key             Location/Qualifiers
            FT   source          1. .20
            FT                   /organism='Homo sapiens (human)'.
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="Homo sapiens"
                     /db_xref="taxon:9606"
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.1e+02;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 7
I27233
LOCUS       I27233                   20 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 3 from patent US 5563255.
ACCESSION   I27233
VERSION     I27233.1  GI:1818009
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5563255-A 3 08-OCT-1996;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        3 a      6 c      4 g      7 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 1.1e+02;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 8
AR073979
LOCUS       AR073979                 20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 48 from patent US 5952229.
ACCESSION   AR073979
VERSION     AR073979.1  GI:10000739
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 48 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
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BASE COUNT        2 a      6 c      4 g      8 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 3.6e+02;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||||
Db      3 CCTGTATGTGCTCCATTG 20


RESULT 9
AR100922/c
LOCUS       AR100922                 40 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 9 from patent US 6083693.
ACCESSION   AR100922
VERSION     AR100922.1  GI:12811720
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 40)
  AUTHORS   Nandabalan,K. and Rothberg,J.Marc.
  TITLE     Identification and comparison of protein-protein interactions that
            occur in populations
  JOURNAL   Patent: US 6083693-A 9 04-JUL-2000;
FEATURES             Location/Qualifiers
     source          1. .40
                     /organism="unknown"
BASE COUNT       10 a      9 c     16 g      5 t
ORIGIN

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  Best Local Similarity   94.4%;  Pred. No. 2.3e+03;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          |||||||||||||||| |
Db     35 CCTGTATGTGCTCCATGG 18


RESULT 10
AR100937/c
LOCUS       AR100937                 40 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 25 from patent US 6083693.
ACCESSION   AR100937
VERSION     AR100937.1  GI:12811735
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 40)
  AUTHORS   Nandabalan,K. and Rothberg,J.Marc.
  TITLE     Identification and comparison of protein-protein interactions that
            occur in populations
  JOURNAL   Patent: US 6083693-A 25 04-JUL-2000;
FEATURES             Location/Qualifiers
     source          1. .40
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BASE COUNT       10 a      9 c     16 g      5 t
ORIGIN

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  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          |||||||||||||||| |
Db     35 CCTGTATGTGCTCCATGG 18


RESULT 11
AR073933
LOCUS       AR073933                 20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 2 from patent US 5952229.
ACCESSION   AR073933
VERSION     AR073933.1  GI:10000693
KEYWORDS    .
SOURCE      Unknown.
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  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 2 14-SEP-1999;
FEATURES             Location/Qualifiers
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4e+03;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      10 GCTCCATTGATGCAGC 25
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Db       1 GCTCCATTGATGCAGC 16


RESULT 12
AR105501
LOCUS       AR105501                  20 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 1 from patent US 6096720.
ACCESSION   AR105501
VERSION     AR105501.1  GI:12819098
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Love,W.Guy, Nicklin,P.Leslie, Hamilton,K.Ophelia and
            Phillips,J.Ann.
  TITLE     Liposomal oligonucleotide compositions
  JOURNAL   Patent: US 6096720-A 1 01-AUG-2000;
FEATURES             Location/Qualifiers
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BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4e+03;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      10 GCTCCATTGATGCAGC 25
           ||||||||||||||||
Db       1 GCTCCATTGATGCAGC 16


RESULT 13
AX224889/c
LOCUS       AX224889                  20 bp    DNA     linear   PAT 10-SEP-2001
DEFINITION  Sequence 43 from Patent WO0161030.
ACCESSION   AX224889
VERSION     AX224889.1  GI:15554962
KEYWORDS    .
SOURCE      human.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,D.M. and Bollon,A.P.
  TITLE     Libraries of optimum subsequence regions of mrna and genomic dna
            for control of gene expression
  JOURNAL   Patent: WO 0161030-A 43 23-AUG-2001;
            Cytoclonal Pharmaceutics, Inc. (US) ; University of Texas at
            Dallas, Dept. of Molecular and Cell Biology (US); Lab. of
            Experimental Carcinogenesis, National Cancer Institute/NIH (US)
FEATURES             Location/Qualifiers
     source          1. .20
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 4e+03;
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Db      16 CCTGTATGTGCTCCAT 1


RESULT 14
AX224890
LOCUS       AX224890                  20 bp    DNA     linear   PAT 10-SEP-2001
DEFINITION  Sequence 44 from Patent WO0161030.
ACCESSION   AX224890
VERSION     AX224890.1  GI:15554963
KEYWORDS    .
SOURCE      human.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,D.M. and Bollon,A.P.
  TITLE     Libraries of optimum subsequence regions of mrna and genomic dna
            for control of gene expression
  JOURNAL   Patent: WO 0161030-A 44 23-AUG-2001;
            Cytoclonal Pharmaceutics, Inc. (US) ; University of Texas at
            Dallas, Dept. of Molecular and Cell Biology (US); Lab. of
            Experimental Carcinogenesis, National Cancer Institute/NIH (US)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="Homo sapiens"
                     /db_xref="taxon:9606"
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  Query Match             64.0%;  Score 16;  DB 6;  Length 20;
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  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CCTGTATGTGCTCCAT 16
           ||||||||||||||||
Db       5 CCTGTATGTGCTCCAT 20


RESULT 15
E49512
LOCUS       E49512                    20 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Antisense oligonucleotide regulation of raft gene expression.
ACCESSION   E49512
VERSION     E49512.1  GI:18628093
KEYWORDS    JP 2000152797-A/2.
SOURCE      Homo sapiens.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   P,M.B. and T,B.R.
  TITLE     Antisense oligonucleotide regulation of raft gene expression
  JOURNAL   Patent: JP 2000152797-A 2 06-JUN-2000;
            ISIS PHARMACEUTICALS INC
COMMENT     OS   Homo sapiens (human)
            PN   JP 2000152797-A/2
            PD   06-JUN-2000
            PF   18-JAN-2000 JP 2000008654
            PR   31-MAY-1994 US    08/250856
            PI   MONIA BURETTO P,BOGGUZU RUSSELL T
            PC   C12N15/09,A61K31/7088,A61K48/00,A61P17/06,A61P35/00,A61P43/00,
            PC   C12N15/00,A
            CC
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            FH   Key             Location/Qualifiers
            FT   source          1. .20
            FT                   /organism='Homo sapiens (human)'.
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="Homo sapiens"
                     /db_xref="taxon:9606"
BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

  Query Match             64.0%;  Score 16;  DB 6;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4e+03;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      10 GCTCCATTGATGCAGC 25
           ||||||||||||||||
Db       1 GCTCCATTGATGCAGC 16


Search completed: October 24, 2002, 04:38:14
Job time : 866.788 secs
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GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:48:07 ; Search time 94.5455 Seconds
(without alignments)
453.992 Million cell updates/sec

Title: US-09-930-283A-2
Perfect score: 25
Sequence: 1 CCTGTATGTGCTCCATTGATGCAGC 25

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 1905168

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	20	80.0	20	17	AAT27527	Mouse/rat c-raf st
	2	20	80.0	20	20	AAZ11557	Mouse and Rat c-ra
	3	20	80.0	20	21	AAA73535	Mouse and rat a-ra
	4	19	76.0	20	17	AAT27483	Human c-raf kinase
c	5	19	76.0	20	19	AAT86617	Rat c-raf targeted
	6	19	76.0	20	20	AAZ11513	Human c-raf kinase
c	7	19	76.0	20	21	AAA92026	C-raf targeted sen
	8	19	76.0	20	21	AAA92027	C-raf targeted ant
	9	19	76.0	20	21	AAA73491	Human c-raf kinase
	10	18	72.0	20	17	AAT27528	Mouse/rat c-raf st
	11	18	72.0	20	20	AAZ11558	Mouse and Rat c-ra
	12	18	72.0	20	21	AAA73536	Mouse and rat a-ra
c	13	16.4	65.6	40	19	AAV05430	Primer RASSfiS use
c	14	16.4	65.6	40	19	AAV05418	Primer used in pro
c	15	16.4	65.6	40	21	AAA72878	Yeast RAF gene PCR
c	16	16.4	65.6	40	21	AAA72893	Yeast PCR primer R
c	17	16.4	65.6	40	21	AAA55851	RAF PCR primer SEQ
c	18	16.4	65.6	40	21	AAA55866	GAD plasmid RAS in
c	19	16	64.0	17	20	AAV90935	Human C-raf target
	20	16	64.0	18	15	AAQ67036	Polynucleotide dir
	21	16	64.0	18	21	AAZ90401	Phosphorothioated
c	22	16	64.0	18	21	AAZ90404	Scrambled control
	23	16	64.0	20	17	AAT27482	Human c-raf kinase
	24	16	64.0	20	18	AAT62145	Human c-raf and de
	25	16	64.0	20	18	AAT59716	Human raf inhibito
	26	16	64.0	20	20	AAZ11512	Human c-raf kinase
	27	16	64.0	20	21	AAA73490	Human c-raf kinase
c	28	16	64.0	20	22	AAD15545	Human C-Raf protei
	29	16	64.0	20	22	AAD15546	Human C-Raf gene t
c	30	15.2	60.8	42	14	AAQ53834	Nucleic acid ligan
c	31	15.2	60.8	42	17	AAT07927	HIV-1 rev protein
c	32	15.2	60.8	42	18	AAV01051	Motif II group SEL
c	33	15.2	60.8	42	19	AAV14836	SELEX identified l
c	34	15.2	60.8	42	20	AAV79911	RNA ligand sequenc
c	35	15.2	60.8	42	21	AAA93011	High-affinity nucl
	36	15	60.0	15	19	AAV54043	Human antisense c-
	37	15	60.0	15	20	AAV99435	Antisense oligonuc
	38	15	60.0	15	21	AAZ98661	Human c-raf-1 PK t
	39	15	60.0	15	24	AAD22797	Human c-raf-1 prot
c	40	15	60.0	45	17	AAT37326	Primer for amplify
	41	14.6	58.4	33	24	ABA51644	Staphylococcus aur
	42	14.6	58.4	33	24	ABA51646	Staphylococcus aur
c	43	14.4	57.6	31	22	AAI30409	Human single nucle
	44	14.2	56.8	31	22	AAF57503	Hen-egg ovalbumin
c	45	14.2	56.8	41	14	AAQ53816	Nucleic acid ligan

ALIGNMENTS

RESULT 1
AAT27527
ID AAT27527 standard; DNA; 20 BP.
XX
AC AAT27527;
XX
DT 04-JUL-1996 (first entry)
XX
DE Mouse/rat c-raf start translation region antisense oligunucleotide.
XX
KW Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW psoriasis; restenosis; 3' untranslated region; ss.
XX
OS Synthetic.
XX
PN WO9532987-A1.
XX
PD 07-DEC-1995.
XX
PF 31-MAY-1995; 95WO-US07111.
XX
PR 31-MAY-1994; 94US-0250856.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Boggs RT, Monia BP;
XX
DR WPI; 1996-030518/03.
XX
PT Oligo:nucleotide(s) targetted to nucleic acids encoding human raf -
PT capable of inhibiting raf expression, used in treatment of
PT hyper:proliferative disorders

XX
PS Disclosure; Page 23; 65pp; English.
XX
CC AAT27521-T27534 are antisense oligonucleotides against both rat and
CC mouse c-raf kinase. They can be used for the inhibition of raf
CC expression. The oligonucleotides (ONs) are targeted to either coding
CC region, start signal or 5' or 3' untranslated region (UTR) mRNA
CC encoding mouse/rat c-raf. The ONs are phosphorothioate linked. The ONs
CC are used to inhibit expression of rat and mouse raf. The ONs can be
CC used in partic. in conditions associated with hyperproliferation e.g.
CC cancer, restenosis, and psoriasis.
XX
SQ Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

Query Match 80.0%; Score 20; DB 17; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 GTATGTGCTCCATTGATGCA 23
||||||||||||||||||||
Db 1 GTATGTGCTCCATTGATGCA 20

RESULT 2
AAZ11557
ID AAZ11557 standard; DNA; 20 BP.
XX
AC AAZ11557;
XX
DT 05-NOV-1999 (first entry)
XX
DE Mouse and Rat c-raf specific antisense oligo ISIS # 10711.
XX
KW Mouse; diagnosis; abnormal proliferative state; hyperproliferation;
KW cancer; psoriasis; blood vessel restenosis; c-raf; rat; antisense; ss.
XX
OS Synthetic.
OS Mus sp.
OS Rattus sp.
XX
PN US5952229-A.
XX
PD 14-SEP-1999.
XX
PF 26-NOV-1996; 96US-0756806.
XX
PR 26-NOV-1996; 96US-0756806.
PR 31-MAY-1994; 94US-0250856.
PR 31-MAY-1995; 95WO-US07111.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Boggs RT, Monia BP;
XX
DR WPI; 1999-527018/44.
XX
PT Oligonucleotides targeted to human raf mRNA useful for treating and
PT diagnosing abnormal proliferative states and inhibiting raf
PT expression
XX
PS Disclosure; Column 15; 29pp; English.
XX
CC The invention provides antisense oligonucleotides targeted to mRNA
CC encoding human raf and capable of inhibiting raf expression. The
CC antisense oligonucleotides are useful for treating and diagnosing
CC abnormal proliferative states and hyperproliferation (e.g. cancer,
CC psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC Sequences Z115511-564 represent antisense oligonucleotides for mouse and
CC rat c-raf.
XX
SQ Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

Query Match 80.0%; Score 20; DB 20; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 GTATGTGCTCCATTGATGCA 23
||||||||||||||||||||
Db 1 GTATGTGCTCCATTGATGCA 20

RESULT 3
AAA73535
ID AAA73535 standard; DNA; 20 BP.
XX
AC AAA73535;
XX
DT 28-NOV-2000 (first entry)
XX
DE Mouse and rat a-raf kinase antisense oligonucleotide #7 (Isis #10711).
XX
KW c-raf; protein kinase; antisense oligonucleotide; cancer;
KW signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW restenosis; inflammatory disorder; tissue graft rejection;
KW endotoxin shock; glomerular nephritis; mouse; rat; ss.
XX
OS Rattus rattus.
OS Mus sp.
XX
PN US6090626-A.
XX
PD 18-JUL-2000.
XX
PF 28-AUG-1998; 98US-0143214.
XX
PR 31-MAY-1994; 94US-0250856.
PR 31-MAY-1995; 95WO-US07111.
PR 26-NOV-1996; 96US-0756806.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Boggs RT, Monia BP;
XX
DR WPI; 2000-531424/48.
XX
PT Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT human raf useful for diagnosis, treatment of raf-associated cell
PT proliferative conditions such as cancer, psoriasis or blood vessel
PT restenosis -
XX
PS Disclosure; Column 14; 31pp; English.
XX
CC c-raf is a serine-threonine-specific protein kinase and is thought to
CC play a fundamental role in signal transduction, and cell proliferation
CC control. The present sequence is an antisense oligonucleotide. This
CC sequence is targeted to mouse and rat c-raf genes, resulting in c-raf
CC expression inhibition. The present sequence may be useful for treating
CC and raf-associated cell hyperproliferation conditions such as cancer,
CC hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC atherosclerosis and smooth muscle cell proliferation in blood vessels
CC e.g. stenosis or restenosis following angioplasty. Also, the present
CC sequence may be useful for treating inflammatory disorders such as tissue
CC graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

Query Match 80.0%; Score 20; DB 21; Length 20;
Best Local Similarity 100.0%; Pred. No. 2.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 4 GTATGTGCTCCATTGATGCA 23
||||||||||||||||||||
Db 1 GTATGTGCTCCATTGATGCA 20

```
RESULT 4
AAT27483
ID   AAT27483 standard; DNA; 20 BP.
XX
AC   AAT27483;
XX
DT   04-JUL-1996  (first entry)
XX
DE   Human c-raf kinase translation start site antisense oligonucleotide.
XX
KW   Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW   phosphorothioate; 2' sugar modification; psoriasis; restenosis; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..20
FT                   /*tag= a
FT                   /note= "opt. phosphorothioate linked"
FT   misc_feature    1..20
FT                   /*tag= b
FT                   /note= "all bases opt. contain 2'-O-methyl
FT                          or 2'-O-propyl sugar modifications"
XX
PN   WO9532987-A1.
XX
PD   07-DEC-1995.
XX
PF   31-MAY-1995;   95WO-US07111.
XX
PR   31-MAY-1994;   94US-0250856.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1996-030518/03.
XX
PT   Oligo:nucleotide(s) targetted to nucleic acids encoding human raf -
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Disclosure; Page 15; 65pp; English.
XX
CC   AAT27481-T27507 are human c-raf kinase antisense oligonucleotides used
CC   for the inhibition of raf expression. The oligonucleotides (ONs) are
CC   targeted to either coding region, start or stop signal or 5' or 3'
CC   untranslated region (UTR) mRNA encoding human c-raf. The ONs may be
CC   phosphorothioate linked and may contain modifications at the 2'
CC   position of the sugar moiety. ONs are pref. complementary to either
CC   3' or 5' UTRs, phosphorothioate linked and contain 2'-O-alkyl sugar
CC   modifications. The ONs are used to inhibit expression of human raf
CC   in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 other;

  Query Match             76.0%;  Score 19;  DB 17;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 6.8;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 5
AAT86617/c
ID   AAT86617 standard; RNA; 20 BP.
XX
AC   AAT86617;
XX
DT   11-JUN-1998  (first entry)
XX
DE   Rat c-raf targeted artificial substrate #2.
XX
KW   Ribonuclease; analogue; substrate; rat; c-raf; dsRNase; diagnosis;
KW   treatment; disease; ss.
XX
OS   Synthetic.
OS   Rattus sp.
XX
PN   WO9746570-A1.
XX
PD   11-DEC-1997.
XX
PF   06-JUN-1997;   97WO-US09963.
XX
PR   06-JUN-1996;   96US-0659440.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Crooke ST;
XX
DR   WPI; 1998-042110/04.
XX
PT   Oligo:ribonucleotide analogues - of mammalian ribonuclease(s),
PT   ribonuclease substrates, etc.
XX
PS   Example 27; Page 93; 140pp; English.
XX
CC   AAT86615-T86620 are oligonucleotides designed to be used in a novel
CC   method for cleaving RNA. These oligonucleotides act as artificial
CC   substrates for mammalian double stranded ribonucleases (dsRNases), in
CC   particular, c-raf. Novel ribonucleases generated by this method could
CC   be used for treating an organism having a disease characterised by the
CC   undesired production of a protein encoded by the mRNA. They can also be
CC   used for identifying an mRNA or a protein or for diagnosing an aberrant
CC   state.
XX
SQ   Sequence 20 BP; 7 A; 4 C; 6 G; 3 U; 0 other;

  Query Match             76.0%;  Score 19;  DB 19;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 6.8;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db     19 CCTGTATGTGCTCCATTGA 1


RESULT 6
AAZ11513
ID   AAZ11513 standard; DNA; 20 BP.
XX
AC   AAZ11513;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Human c-raf kinase antisense oligo ISIS # 5075.
XX
KW   Human; raf; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf kinase; antisense; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
```

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XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Disclosure; Column 9; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences AAZ11511-537 and AAZ11565-573 represent antisense
CC   oligonucleotides for human c-raf kinase.
XX
SQ   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 other;

  Query Match            76.0%;  Score 19;  DB 20;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 6.8;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 7
AAA92026/c
ID   AAA92026 standard; RNA; 20 BP.
XX
AC   AAA92026;
XX
DT   12-JAN-2001  (first entry)
XX
DE   C-raf targeted sense RNA substrate for dsRNase #2.
XX
KW   dsRNase  activation; strand cleavage; sense oligonucleotide;
KW   abnormal RNA detection; enzyme activity modulation; ss.
XX
OS   Synthetic.
XX
PN   US6107094-A.
XX
PD   22-AUG-2000.
XX
PF   06-JUN-1997;   97US-0870608.
XX
PR   06-JUN-1996;   96US-0659440.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Crooke ST;
XX
DR   WPI; 2000-578540/54.
XX
PT   Novel oligomeric compounds for diagnostic and research purposes,
PT   comprising segments with specific nucleoside subunits linked by
PT   phosphorothioate internucleoside linkages  -
XX
PS   Example 27a; column 51; 44pp; English.
XX
CC   The present sequence is a sense RNA sequence which, when hybridised
CC   with its complement, was used as a substrate for a dsRNase. This type of
CC   RNase, which specifically cleaves double-stranded RNA, is used in the
CC   methods of the invention and can be used to detect the presence of
CC   abnormal RNA or abnormal expression of RNA in organisms or cells. They
CC   can also be used to modulate enzyme activity in in vitro assays. The
CC   present sequence has phosphodiester linkages in an 8 base gap with flanks
CC   having residues with phosphorothioate linkages either with or without
CC   2'-methoxynucleosides.
XX
SQ   Sequence 20 BP; 7 A; 4 C; 6 G; 3 U; 0 other;

  Query Match            76.0%;  Score 19;  DB 21;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 6.8;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db     19 CCTGTATGTGCTCCATTGA 1


RESULT 8
AAA92027
ID   AAA92027 standard; RNA; 20 BP.
XX
AC   AAA92027;
XX
DT   12-JAN-2001  (first entry)
XX
DE   C-raf targeted antisense RNA substrate for dsRNase #2.
XX
KW   dsRNase  activation; strand cleavage; antisense oligonucleotide;
KW   abnormal RNA detection; enzyme activity modulation; ss.
XX
OS   Synthetic.
XX
PN   US6107094-A.
XX
PD   22-AUG-2000.
XX
PF   06-JUN-1997;   97US-0870608.
XX
PR   06-JUN-1996;   96US-0659440.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Crooke ST;
XX
DR   WPI; 2000-578540/54.
XX
PT   Novel oligomeric compounds for diagnostic and research purposes,
PT   comprising segments with specific nucleoside subunits linked by
PT   phosphorothioate internucleoside linkages  -
XX
PS   Example 27a; column 51; 44pp; English.
XX
CC   The present sequence is an antisense RNA sequence which, when hybridised
CC   with its complement, was used as a substrate for a dsRNase. This type of
CC   RNase, which specifically cleaves double-stranded RNA, is used in the
CC   methods of the invention and can be used to detect the presence of
CC   abnormal RNA or abnormal expression of RNA in organisms or cells. They
CC   can also be used to modulate enzyme activity in in vitro assays. The
CC   present sequence contains 2'-methoxyphosphorothioate wings on either side
CC   of an 8 base ribonucleotide gap having either phosphodiester or
CC   phosphorothioate linkages.
XX
SQ   Sequence 20 BP; 3 A; 6 C; 4 G; 7 U; 0 other;

  Query Match            76.0%;  Score 19;  DB 21;  Length 20;
  Best Local Similarity  63.2%;  Pred. No. 6.8;
  Matches   12;  Conservative    7;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          ||:|:|:|:||:|||::||
Db      2 CCUGUAUGUGCUCCAUUGA 20


RESULT 9
AAA73491
```

```
ID   AAA73491 standard; DNA; 20 BP.
XX
AC   AAA73491;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Human c-raf kinase antisense oligonucleotide #3 (Isis #5075,#7836,#7844).
XX
KW   Human; c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "All or some nucleotides are optionally with
FT                   2'-methoxyethoxy, or 2'-O-propyl modification. Also,
FT                   optionally phosphodiester or phosphothioate backbone"
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis  -
XX
PS   Disclosure; Column 9; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to human c-raf gene, resulting in c-raf expression
CC   inhibition. The present sequence may be useful for treating and
CC   raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 other;

  Query Match             76.0%;  Score 19;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 6.8;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 10
AAT27528
ID   AAT27528 standard; DNA; 20 BP.
XX
AC   AAT27528;
XX
DT   04-JUL-1996  (first entry)
XX
DE   Mouse/rat c-raf start translation region antisense oligunucleotide.
XX
KW   Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW   psoriasis; restenosis; 3' untranslated region; ss.
XX
OS   Synthetic.
XX
PN   WO9532987-A1.
XX
PD   07-DEC-1995.
XX
PF   31-MAY-1995;   95WO-US07111.
XX
PR   31-MAY-1994;   94US-0250856.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1996-030518/03.
XX
PT   Oligo:nucleotide(s) targetted to nucleic acids encoding human raf  -
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Disclosure; Page 23; 65pp; English.
XX
CC   AAT27521-T27534 are antisense oligonucleotides against both rat and
CC   mouse c-raf kinase. They can be used for the inhibition of raf
CC   expression. The oligonucleotides (ONs) are targeted to either coding
CC   region, start signal or 5' or 3' untranslated region (UTR) mRNA
CC   encoding mouse/rat c-raf. The ONs are phosphorothioate linked. The ONs
CC   are used to inhibit expression of rat and mouse raf. The ONs can be
CC   used in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 2 A; 6 C; 4 G; 8 T; 0 other;

  Query Match             72.0%;  Score 18;  DB 17;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 21;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||||
Db      3 CCTGTATGTGCTCCATTG 20


RESULT 11
AAZ11558
ID   AAZ11558 standard; DNA; 20 BP.
XX
AC   AAZ11558;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Mouse and Rat c-raf specific antisense oligo ISIS # 10712.
XX
KW   Mouse; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf; rat; antisense; ss.
XX
OS   Synthetic.
OS   Mus sp.
OS   Rattus sp.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
```

```
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Disclosure; Column 15; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences Z115511-564 represent antisense oligonucleotides for mouse and
CC   rat c-raf.
XX
SQ   Sequence 20 BP; 2 A; 6 C; 4 G; 8 T; 0 other;

  Query Match             72.0%;  Score 18;  DB 20;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 21;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CCTGTATGTGCTCCATTG 18
           ||||||||||||||||||
Db       3 CCTGTATGTGCTCCATTG 20


RESULT 12
AAA73536
ID   AAA73536 standard; DNA; 20 BP.
XX
AC   AAA73536;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Mouse and rat a-raf kinase antisense oligonucleotide #8 (Isis #10712).
XX
KW   c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; mouse; rat; ss.
XX
OS   Rattus rattus.
OS   Mus sp.
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis -
XX
PS   Disclosure; Column 14; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to mouse and rat c-raf genes, resulting in c-raf
CC   expression inhibition. The present sequence may be useful for treating
CC   and raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 2 A; 6 C; 4 G; 8 T; 0 other;

  Query Match             72.0%;  Score 18;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 21;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CCTGTATGTGCTCCATTG 18
           ||||||||||||||||||
Db       3 CCTGTATGTGCTCCATTG 20


RESULT 13
AAV05430/c
ID   AAV05430 standard; DNA; 40 BP.
XX
AC   AAV05430;
XX
DT   05-JUN-1998  (first entry)
XX
DE   Primer RASSfiS used in protein-protein interaction detection.
XX
KW   PCR primer; protein-protein interaction; detection; ss.
XX
OS   Synthetic.
XX
PN   WO9747763-A1.
XX
PD   18-DEC-1997.
XX
PF   13-JUN-1997;   97WO-US10392.
XX
PR   14-JUN-1996;   96US-0663824.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Kalbfleisch TS,  Knight JR,  Nandabalan K,  Rothberg JM;
PI   Yang M;
XX
DR   WPI; 1998-052326/05.
XX
PT   Identification and comparison of protein-protein interactions -
PT   useful for assembling and processing unified databases of sequences
XX
PS   Example; Page 274; 426pp; English.
XX
CC   The present sequence was used in the development of a novel method
CC   for the detection of one or more protein-protein interactions.
CC   The method can be used for comparative analysis of protein-protein
CC   interactions that occur in two or more different tissue/cell-types,
CC   disease states or stages of development. The genes encoding the
CC   proteins involved in these interactions, can be identified and
CC   isolated rapidly. The method can also be used for concurrent
CC   identification of inhibitors of the protein-protein interactions
CC   that characterise a given population, and which have therapeutic
CC   value.
```

```
XX
SQ   Sequence 40 BP; 10 A; 9 C; 16 G; 5 T; 0 other;

  Query Match             65.6%;  Score 16.4;  DB 19;  Length 40;
  Best Local Similarity   94.4%;  Pred. No. 1.5e+02;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||| |
Db     35 CCTGTATGTGCTCCATGG 18


RESULT 14
AAV05418/c
ID   AAV05418 standard; DNA; 40 BP.
XX
AC   AAV05418;
XX
DT   05-JUN-1998  (first entry)
XX
DE   Primer used in protein-protein interaction detection.
XX
KW   PCR primer; protein-protein interaction; detection; ss.
XX
OS   Synthetic.
XX
PN   WO9747763-A1.
XX
PD   18-DEC-1997.
XX
PF   13-JUN-1997;   97WO-US10392.
XX
PR   14-JUN-1996;   96US-0663824.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Kalbfleisch TS,  Knight JR,  Nandabalan K,  Rothberg JM;
PI   Yang M;
XX
DR   WPI; 1998-052326/05.
XX
PT   Identification and comparison of protein-protein interactions -
PT   useful for assembling and processing unified databases of sequences
XX
PS   Example; Page 262; 426pp; English.
XX
CC   The present sequence was used in the development of a novel method
CC   for the detection of one or more protein-protein interactions.
CC   The method can be used for comparative analysis of protein-protein
CC   interactions that occur in two or more different tissue/cell-types,
CC   disease states or stages of development. The genes encoding the
CC   proteins involved in these interactions, can be identified and
CC   isolated rapidly. The method can also be used for concurrent
CC   identification of inhibitors of the protein-protein interactions
CC   that characterise a given population, and which have therapeutic
CC   value.
XX
SQ   Sequence 40 BP; 10 A; 9 C; 16 G; 5 T; 0 other;

  Query Match             65.6%;  Score 16.4;  DB 19;  Length 40;
  Best Local Similarity   94.4%;  Pred. No. 1.5e+02;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||| |
Db     35 CCTGTATGTGCTCCATGG 18


RESULT 15
AAA72878/c
ID   AAA72878 standard; DNA; 40 BP.
XX
AC   AAA72878;
XX
DT   09-FEB-2001  (first entry)
XX
DE   Yeast RAF gene PCR primer #1.
XX
KW   PCR primer; yeast; two-hybrid system; protein-protein interaction;
KW   cancer; ss.
XX
OS   Saccharomyces cerevisiae.
XX
PN   US6083693-A.
XX
PD   04-JUL-2000.
XX
PF   14-JUN-1996;   96US-0663824.
XX
PR   14-JUN-1996;   96US-0663824.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Nandabalan K,  Rothberg JM;
XX
DR   WPI; 2000-464335/40.
XX
PT   Detecting protein-protein interactions in protein populations useful
PT   for identifying genes encoding the proteins, and inhibitors of the
PT   interactions, by detecting transcriptional regulation leading to
PT   reporter gene activation  -
XX
PS   Examples; Column 117; 135pp; English.
XX
CC   The present invention relates to methods for detecting and isolating
CC   genes encoding proteins that interact with each other, via the
CC   reconstitution of a transcription factor and hence reporter gene
CC   activation. Proteins are fused to either the yeast DNA-binding domain of
CC   a transcriptional activator or to the activation domain of a
CC   transcriptional activator. The present sequence is a PCR primer used in
CC   the present invention to amplify yeast fusion genes. The present method
CC   may be used to identify protein-protein interactions and genes encoding
CC   the interacting proteins relevant to a particular tissue, stage or
CC   disease e.g. cancer.
XX
SQ   Sequence 40 BP; 10 A; 9 C; 16 G; 5 T; 0 other;

  Query Match             65.6%;  Score 16.4;  DB 21;  Length 40;
  Best Local Similarity   94.4%;  Pred. No. 1.5e+02;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||| |
Db     35 CCTGTATGTGCTCCATGG 18


Search completed: October 24, 2002, 04:06:06
Job time : 95.5455 secs
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GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 24, 2002, 01:05:22 ; Search time 34.0909 Seconds
(without alignments)
180.131 Million cell updates/sec

Title: US-09-930-283A-2
Perfect score: 25
Sequence: 1 CCTGTATGTGCTCCATTGATGCAGC 25

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 543772

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
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6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	25	100.0	25	3	US-08-957-327-2	Sequence 2, Appli
	2	25	100.0	25	4	US-09-482-084-2	Sequence 2, Appli
	3	20	80.0	20	2	US-08-756-806A-47	Sequence 47, Appl
	4	20	80.0	20	3	US-09-143-214-47	Sequence 47, Appl
	5	20	80.0	20	5	PCT-US95-07111A-47	Sequence 47, Appl
	6	19	76.0	20	1	US-08-250-856A-3	Sequence 3, Appli
	7	19	76.0	20	2	US-08-756-806A-3	Sequence 3, Appli
	8	19	76.0	20	3	US-09-143-214-3	Sequence 3, Appli
c	9	19	76.0	20	3	US-08-870-608-5	Sequence 5, Appli
	10	19	76.0	20	3	US-08-870-608-6	Sequence 6, Appli
	11	19	76.0	20	5	PCT-US95-07111A-3	Sequence 3, Appli
	12	18	72.0	20	2	US-08-756-806A-48	Sequence 48, Appl
	13	18	72.0	20	3	US-09-143-214-48	Sequence 48, Appl
	14	18	72.0	20	5	PCT-US95-07111A-48	Sequence 48, Appl
c	15	16.4	65.6	40	3	US-08-874-825-9	Sequence 9, Appli
c	16	16.4	65.6	40	3	US-08-874-825-25	Sequence 25, Appl
c	17	16.4	65.6	40	3	US-08-663-824-9	Sequence 9, Appli
c	18	16.4	65.6	40	3	US-08-663-824-25	Sequence 25, Appl
	19	16	64.0	18	3	US-08-991-830A-1	Sequence 1, Appli
c	20	16	64.0	18	3	US-08-991-830A-4	Sequence 4, Appli
	21	16	64.0	18	5	PCT-US93-12603-3	Sequence 3, Appli
	22	16	64.0	20	1	US-08-250-856A-2	Sequence 2, Appli
	23	16	64.0	20	2	US-08-756-806A-2	Sequence 2, Appli
	24	16	64.0	20	3	US-09-143-214-2	Sequence 2, Appli
	25	16	64.0	20	3	US-09-000-136-1	Sequence 1, Appli
	26	16	64.0	20	5	PCT-US95-07111A-2	Sequence 2, Appli
c	27	15.2	60.8	42	1	US-07-931-473B-311	Sequence 311, App
c	28	15.2	60.8	42	1	US-07-714-131C-311	Sequence 311, App
c	29	15.2	60.8	42	1	US-08-412-110-311	Sequence 311, App
c	30	15.2	60.8	42	1	US-08-409-442A-311	Sequence 311, App
c	31	15.2	60.8	42	2	US-08-469-609A-311	Sequence 311, App
c	32	15.2	60.8	42	3	US-09-143-190-311	Sequence 311, App
	33	15	60.0	15	3	US-08-957-327-1	Sequence 1, Appli
c	34	15	60.0	15	3	US-08-957-327-3	Sequence 3, Appli
	35	15	60.0	15	4	US-09-078-954-15	Sequence 15, Appl
	36	15	60.0	15	4	US-09-482-084-1	Sequence 1, Appli
c	37	15	60.0	15	4	US-09-482-084-3	Sequence 3, Appli
c	38	14.2	56.8	41	1	US-07-931-473B-293	Sequence 293, App
c	39	14.2	56.8	41	1	US-07-714-131C-293	Sequence 293, App
c	40	14.2	56.8	41	1	US-08-412-110-293	Sequence 293, App
c	41	14.2	56.8	41	1	US-08-409-442A-293	Sequence 293, App
c	42	14.2	56.8	41	2	US-08-469-609A-293	Sequence 293, App
c	43	14.2	56.8	41	3	US-09-143-190-293	Sequence 293, App
	44	13.8	55.2	30	2	US-08-673-312-8	Sequence 8, Appli
	45	13.6	54.4	37	2	US-08-472-659-32	Sequence 32, Appl

ALIGNMENTS

RESULT 1
US-08-957-327-2
; Sequence 2, Application US/08957327
; Patent No. 6126965
; GENERAL INFORMATION:
; APPLICANT: Kasid, Usha
; APPLICANT: Gokhale, Prafulla
; APPLICANT: Dritschilo, Anatoly
; APPLICANT: Rahman, Aqulur
; TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hendricks and Assoc.
; STREET: P.O. Box 2509
; CITY: Fairfax
; STATE: VA
; COUNTRY: US
; ZIP: 22031
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/957,327
; FILING DATE: 24-OCT-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Hendricks, Glenna
; REGISTRATION NUMBER: 32,535
; REFERENCE/DOCKET NUMBER: kasid
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 591-4470
; TELEFAX: (703) 591-4428
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 25 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: unknown
; MOLECULE TYPE: DNA (genomic)
; HYPOTHETICAL: NO
; ANTI-SENSE: YES
US-08-957-327-2

Query Match 100.0%; Score 25; DB 3; Length 25;
Best Local Similarity 100.0%; Pred. No. 0.00094;
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 CCTGTATGTGCTCCATTGATGCAGC 25

```
                     ||||||||||||||||||||||||
Db       1 CCTGTATGTGCTCCATTGATGCAGC 25


RESULT 2
US-09-482-084-2
; Sequence 2, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 2:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 25 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-482-084-2

  Query Match             100.0%;  Score 25;  DB 4;  Length 25;
  Best Local Similarity   100.0%;  Pred. No. 0.00094;
  Matches   25;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 CCTGTATGTGCTCCATTGATGCAGC 25
           |||||||||||||||||||||||||
Db       1 CCTGTATGTGCTCCATTGATGCAGC 25


RESULT 3
US-08-756-806A-47
; Sequence 47, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/756,806A
;      FILING DATE:  No. 5952229ember 26, 1996
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-756-806A-47

  Query Match             80.0%;  Score 20;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.25;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       4 GTATGTGCTCCATTGATGCA 23
           ||||||||||||||||||||
Db       1 GTATGTGCTCCATTGATGCA 20


RESULT 4
US-09-143-214-47
; Sequence 47, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/143,214
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/756,806
;      FILING DATE:  No. 6090626ember 26, 1996
```

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;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-09-143-214-47

  Query Match             80.0%;  Score 20;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.25;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      4 GTATGTGCTCCATTGATGCA 23
          ||||||||||||||||||||
Db      1 GTATGTGCTCCATTGATGCA 20


RESULT 5
PCT-US95-07111A-47
; Sequence 47, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-47

  Query Match             80.0%;  Score 20;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.25;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      4 GTATGTGCTCCATTGATGCA 23
          ||||||||||||||||||||
Db      1 GTATGTGCTCCATTGATGCA 20


RESULT 6
US-08-250-856A-3
; Sequence 3, Application US/08250856A
; Patent No. 5563255
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  39
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/250,856A
;      FILING DATE:  May 31, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0094
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-250-856A-3

  Query Match             76.0%;  Score 19;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.79;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 7
US-08-756-806A-3
; Sequence 3, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
```

```
;       STREET:  66 East Main Street
;       CITY:  Marlton
;       STATE:  NJ
;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/756,806A
;       FILING DATE:  No. 5952229ember 26, 1996
;       CLASSIFICATION:  536
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  3:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-08-756-806A-3

  Query Match             76.0%;  Score 19;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.79;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 8
US-09-143-214-3
; Sequence 3, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;     APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;     TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;     TITLE OF INVENTION:  of raf Gene Expression
;     NUMBER OF SEQUENCES:  65
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Law Offices of Jane Massey Licata
;       STREET:  66 East Main Street
;       CITY:  Marlton
;       STATE:  NJ
;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/143,214
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/756,806
;       FILING DATE:  No. 6090626ember 26, 1996
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  3:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-09-143-214-3

  Query Match             76.0%;  Score 19;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.79;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          |||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 9
US-08-870-608-5/c
; Sequence 5, Application US/08870608
; Patent No. 6107094
;  GENERAL INFORMATION:
;     APPLICANT:  Stanley T. Crooke
;     TITLE OF INVENTION:  Oligonucleotides And Ribonucleases For Cleaving
;     TITLE OF INVENTION:  RNA
;     NUMBER OF SEQUENCES:  8
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz & No. 6107094ris LLP
;       STREET:  One Liberty Place - 46th Floor
;       CITY:  Philadelphia
;       STATE:  PA
;       COUNTRY:  U.S.A.
;       ZIP:  19103
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5 inch disk, 1.44 Mb
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  WordPerfect 8.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/870,608
;       FILING DATE:  06-JUN-1997
;       CLASSIFICATION:  514
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Joseph Lucci
;       REGISTRATION NUMBER:  33,307
;       REFERENCE/DOCKET NUMBER:  ISIS-2484
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  215-568-3100
;       TELEFAX:  215-568-3439
;   INFORMATION FOR SEQ ID NO:  5:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20 bases
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-870-608-5

  Query Match             76.0%;  Score 19;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.79;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy      1 CCTGTATGTGCTCCATTGA 19
          ||||||||||||||||||
Db     19 CCTGTATGTGCTCCATTGA 1


RESULT 10
US-08-870-608-6
; Sequence 6, Application US/08870608
; Patent No. 6107094
;  GENERAL INFORMATION:
;    APPLICANT:  Stanley T. Crooke
;    TITLE OF INVENTION:  Oligonucleotides And Ribonucleases For Cleaving
;    TITLE OF INVENTION:  RNA
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz & No. 6107094ris LLP
;      STREET:  One Liberty Place - 46th Floor
;      CITY:  Philadelphia
;      STATE:  PA
;      COUNTRY:  U.S.A.
;      ZIP:  19103
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5 inch disk, 1.44 Mb
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  WordPerfect 8.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/870,608
;      FILING DATE:  06-JUN-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Joseph Lucci
;      REGISTRATION NUMBER:  33,307
;      REFERENCE/DOCKET NUMBER:  ISIS-2484
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  215-568-3100
;      TELEFAX:  215-568-3439
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 bases
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-870-608-6

  Query Match             76.0%;  Score 19;  DB 3;  Length 20;
  Best Local Similarity   63.2%;  Pred. No. 0.79;
  Matches   12;  Conservative    7;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          ||:|:|:|:||:|||::||
Db      2 CCUGUAUGUGCUCCAUUGA 20


RESULT 11
PCT-US95-07111A-3
; Sequence 3, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-3

  Query Match             76.0%;  Score 19;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 0.79;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTGA 19
          ||||||||||||||||||
Db      2 CCTGTATGTGCTCCATTGA 20


RESULT 12
US-08-756-806A-48
; Sequence 48, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/756,806A
;      FILING DATE:  No. 5952229ember 26, 1996
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  48:
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;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-756-806A-48

  Query Match             72.0%;  Score 18;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||||
Db      3 CCTGTATGTGCTCCATTG 20


RESULT 13
US-09-143-214-48
; Sequence 48, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/143,214
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/756,806
;      FILING DATE:  No. 6090626ember 26, 1996
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-09-143-214-48

  Query Match             72.0%;  Score 18;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
          ||||||||||||||||||
Db      3 CCTGTATGTGCTCCATTG 20


RESULT 14
PCT-US95-07111A-48
; Sequence 48, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-48

  Query Match             72.0%;  Score 18;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 CCTGTATGTGCTCCATTG 18
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Db      3 CCTGTATGTGCTCCATTG 20


RESULT 15
US-08-874-825-9/c
; Sequence 9, Application US/08874825
; Patent No. 6057101
;  GENERAL INFORMATION:
;    APPLICANT:  Nandabalan, Krishnan
;    APPLICANT:  Rothberg, Jonathan
;    APPLICANT:  Yang, Meijia
;    APPLICANT:  Knight, James
;    APPLICANT:  Kalbfleisch, Theodore
;    TITLE OF INVENTION:  IDENTIFICATION AND COMPARISON OF
;    TITLE OF INVENTION:  PROTEIN-PROTEIN INTERACTIONS THAT OCCUR IN POPULATIONS
;    TITLE OF INVENTION:  AND IDENTIFICATION OF INHIBITORS OF THESE INTERACTORS
;    NUMBER OF SEQUENCES:  122
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Pennie & Edmonds
;      STREET:  1155 Avenue of the Americas
;      CITY:  New York
;      STATE:  NY
```

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;      COUNTRY:  USA
;      ZIP:  10036/2711
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/874,825
;      FILING DATE:  13-JUN-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/663,824
;      FILING DATE:  14-JUN-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Misrock, S. Leslie
;      REGISTRATION NUMBER:  18,872
;      REFERENCE/DOCKET NUMBER:  7934-045
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  212-790-9090
;      TELEFAX:  212-869-8864
;      TELEX:  66141 PENNIE
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  40 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA
US-08-874-825-9

  Query Match             65.6%;  Score 16.4;  DB 3;  Length 40;
  Best Local Similarity   94.4%;  Pred. No. 18;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 CCTGTATGTGCTCCATTG 18
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Db      35 CCTGTATGTGCTCCATGG 18


Search completed: October 24, 2002, 06:24:45
Job time : 35.0909 secs
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GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:54:17 ; Search time 519.273 Seconds
(without alignments)
604.496 Million cell updates/sec

Title: US-09-930-283A-3
Perfect score: 15
Sequence: 1 GCATCAATGGAGCAC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 708260

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
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9: gb_pr:*
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13: gb_un:*
14: gb_vi:*
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16: em_fun:*
17: em_hum:*
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30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htgo_inv:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
	c	1	15	100.0	15	6	AR110775	AR110775 Sequence
		2	15	100.0	15	6	AR110777	AR110777 Sequence
	c	3	15	100.0	15	6	AR167449	AR167449 Sequence
	c	4	15	100.0	20	6	AR073978	AR073978 Sequence
	c	5	15	100.0	25	6	AR110776	AR110776 Sequence
	c	6	13	86.7	20	6	AR073933	AR073933 Sequence
	c	7	13	86.7	20	6	AR105501	AR105501 Sequence
	c	8	13	86.7	20	6	E49512	E49512 Antisense o
	c	9	13	86.7	20	6	I27232	I27232 Sequence 2
		10	12.4	82.7	20	6	AR037100	AR037100 Sequence
		11	12.4	82.7	20	6	AR070338	AR070338 Sequence
	c	12	12.4	82.7	20	6	AX294189	AX294189 Sequence
	c	13	12.4	82.7	24	6	AX289556	AX289556 Sequence
	c	14	12.4	82.7	27	6	AR039324	AR039324 Sequence
	c	15	12	80.0	20	6	AR073934	AR073934 Sequence
		16	12	80.0	20	6	AR106990	AR106990 Sequence
	c	17	12	80.0	20	6	AR106991	AR106991 Sequence
	c	18	12	80.0	20	6	E49513	E49513 Antisense o
	c	19	12	80.0	20	6	I27233	I27233 Sequence 3
	c	20	11.8	78.7	26	6	A16281	A16281 Oligonucleo
		21	11.8	78.7	27	6	A16266	A16266 Oligonucleo
	c	22	11.8	78.7	27	6	A16267	A16267 Oligonucleo
		23	11.8	78.7	27	6	AR080410	AR080410 Sequence
		24	11.8	78.7	27	6	AR092534	AR092534 Sequence
		25	11.8	78.7	27	6	AR122889	AR122889 Sequence
		26	11.8	78.7	27	6	AR123544	AR123544 Sequence
		27	11.8	78.7	27	6	AR148361	AR148361 Sequence
	c	28	11.8	78.7	30	6	AR069912	AR069912 Sequence
		29	11.4	76.0	20	6	AR117463	AR117463 Sequence
		30	11.4	76.0	20	6	AR117464	AR117464 Sequence
	c	31	11.4	76.0	27	6	AR040292	AR040292 Sequence
	c	32	11.4	76.0	29	6	I34997	I34997 Sequence 83
		33	11.4	76.0	32	6	AX118830	AX118830 Sequence
		34	11.4	76.0	32	6	I33123	I33123 Sequence 14
	c	35	11.4	76.0	37	6	AX219955	AX219955 Sequence
	c	36	11	73.3	20	6	AR073979	AR073979 Sequence
		37	11	73.3	26	6	I81965	I81965 Sequence 4
	c	38	11	73.3	26	6	I82041	I82041 Sequence 80
		39	11	73.3	26	6	I91654	I91654 Sequence 4
	c	40	11	73.3	26	6	I91729	I91729 Sequence 79
		41	11	73.3	26	6	I91737	I91737 Sequence 87
		42	11	73.3	36	6	AR079205	AR079205 Sequence
		43	11	73.3	36	6	AR087480	AR087480 Sequence
		44	11	73.3	36	6	I15210	I15210 Sequence 5
	c	45	10.8	72.0	20	6	AR016146	AR016146 Sequence

ALIGNMENTS

RESULT 1
AR110775/c
LOCUS AR110775 15 bp DNA linear PAT 14-FEB-2001
DEFINITION Sequence 1 from patent US 6126965.
ACCESSION AR110775
VERSION AR110775.1 GI:12827623
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 15)
AUTHORS Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
TITLE Liposomes containing oligonucleotides
JOURNAL Patent: US 6126965-A 1 03-OCT-2000;
FEATURES Location/Qualifiers
source 1. .15
/organism="unknown"
BASE COUNT 2 a 4 c 4 g 5 t
ORIGIN

Query Match 100.0%; Score 15; DB 6; Length 15;
Best Local Similarity 100.0%; Pred. No. 4.2e+02;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     15 GCATCAATGGAGCAC 1


RESULT 2
AR110777
LOCUS       AR110777                  15 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 3 from patent US 6126965.
ACCESSION   AR110777
VERSION     AR110777.1  GI:12827625
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
  TITLE     Liposomes containing oligonucleotides
  JOURNAL   Patent: US 6126965-A 3 03-OCT-2000;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
BASE COUNT        5 a      4 c      4 g      2 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 4.2e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db      1 GCATCAATGGAGCAC 15


RESULT 3
AR167449/c
LOCUS       AR167449                  15 bp    DNA     linear   PAT 17-DEC-2001
DEFINITION  Sequence 15 from patent US 6287591.
ACCESSION   AR167449
VERSION     AR167449.1  GI:17903229
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Semple,S.C.; Klimuk,S.K., Harasym,T., Hope,M.J., Ansell,S.M.,
            Cullis,P., Scherrer,P. and Debeyer,D.
  TITLE     Charged therapeutic agents encapsulated in lipid particles
            containing four lipid components
  JOURNAL   Patent: US 6287591-A 15 11-SEP-2001;
FEATURES             Location/Qualifiers
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                     /organism="unknown"
BASE COUNT        2 a      4 c      4 g      5 t
ORIGIN

  Query Match           100.0%;  Score 15;  DB 6;  Length 15;
  Best Local Similarity  100.0%;  Pred. No. 4.2e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     15 GCATCAATGGAGCAC 1


RESULT 4
AR073978/c
LOCUS       AR073978                  20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 47 from patent US 5952229.
ACCESSION   AR073978
VERSION     AR073978.1  GI:10000738
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 47 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        4 a      4 c      5 g      7 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 4.1e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     19 GCATCAATGGAGCAC 5


RESULT 5
AR110776/c
LOCUS       AR110776                  25 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 2 from patent US 6126965.
ACCESSION   AR110776
VERSION     AR110776.1  GI:12827624
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 25)
  AUTHORS   Kasid,U., Gokhale,P., Dritschilo,A. and Rahman,A.
  TITLE     Liposomes containing oligonucleotides
  JOURNAL   Patent: US 6126965-A 2 03-OCT-2000;
FEATURES             Location/Qualifiers
     source          1. .25
                     /organism="unknown"
BASE COUNT        4 a      7 c      6 g      8 t
ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 3.9e+02;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     22 GCATCAATGGAGCAC 8


RESULT 6
AR073933/c
LOCUS       AR073933                  20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 2 from patent US 5952229.
ACCESSION   AR073933
VERSION     AR073933.1  GI:10000693
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 2 14-SEP-1999;
FEATURES             Location/Qualifiers
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                     /organism="unknown"
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ORIGIN

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  Best Local Similarity  100.0%;  Pred. No. 7.6e+03;
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  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
          |||||||||||||
Db     13 GCATCAATGGAGC 1


RESULT 7
AR105501/c
LOCUS       AR105501                  20 bp    DNA     linear   PAT 14-FEB-2001
DEFINITION  Sequence 1 from patent US 6096720.
ACCESSION   AR105501
VERSION     AR105501.1  GI:12819098
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Love,W.Guy, Nicklin,P.Leslie, Hamilton,K.Ophelia and
            Phillips,J.Ann.
  TITLE     Liposomal oligonucleotide compositions
  JOURNAL   Patent: US 6096720-A 1 01-AUG-2000;
FEATURES             Location/Qualifiers
     source          1. .20
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BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 7.6e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
          |||||||||||||
Db     13 GCATCAATGGAGC 1


RESULT 8
E49512/c
LOCUS       E49512                    20 bp    DNA     linear   PAT 31-JAN-2002
DEFINITION  Antisense oligonucleotide regulation of raft gene expression.
ACCESSION   E49512
VERSION     E49512.1  GI:18628093
KEYWORDS    JP 2000152797-A/2.
SOURCE      Homo sapiens.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   P,M.B. and T,B.R.
  TITLE     Antisense oligonucleotide regulation of raft gene expression
  JOURNAL   Patent: JP 2000152797-A 2 06-JUN-2000;
            ISIS PHARMACEUTICALS INC
COMMENT     OS   Homo sapiens (human)
            PN   JP 2000152797-A/2
            PD   06-JUN-2000
            PF   18-JAN-2000 JP 2000008654
            PR   31-MAY-1994 US    08/250856
            PI   MONIA BURETTO P,BOGGUZU RUSSELL T
            PC   C12N15/09,A61K31/7088,A61K48/00,A61P17/06,A61P35/00,A61P43/00,
            PC   C12N15/00,A
            CC
            FH   Key             Location/Qualifiers
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FEATURES             Location/Qualifiers
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 7.6e+03;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
          |||||||||||||
Db     13 GCATCAATGGAGC 1


RESULT 9
I27232/c
LOCUS       I27232                    20 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 2 from patent US 5563255.
ACCESSION   I27232
VERSION     I27232.1  GI:1818008
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5563255-A 2 08-OCT-1996;
FEATURES             Location/Qualifiers
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BASE COUNT        5 a      5 c      4 g      6 t
ORIGIN

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Qy      1 GCATCAATGGAGC 13
          |||||||||||||
Db     13 GCATCAATGGAGC 1


RESULT 10
AR037100
LOCUS       AR037100                  20 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 7 from patent US 5801021.
ACCESSION   AR037100
VERSION     AR037100.1  GI:5954956
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,J.W., Collins,C., Pinkel,D., Kallioniemi,O.-P. and Tanner,M.M.
  TITLE     Amplifications of chromosomal region 20q13 as a prognostic
            indicator in breast cancer
  JOURNAL   Patent: US 5801021-A 7 01-SEP-1998;
FEATURES             Location/Qualifiers
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BASE COUNT        9 a      2 c      5 g      4 t
ORIGIN

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  Best Local Similarity   92.9%;  Pred. No. 1.8e+04;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCA 14
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Db      4 GAATCAATGGAGCA 17


RESULT 11
AR070338
LOCUS       AR070338                  20 bp    DNA     linear   PAT 18-FEB-2000
DEFINITION  Sequence 15 from patent US 5892010.
ACCESSION   AR070338
VERSION     AR070338.1  GI:7221226
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KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Gray,J., Collins,C., Hwang,S., Godfrey,T., Kowbel,D. and Rommens,J.
  TITLE     Genes from the 20Q13 amplicon and their uses
  JOURNAL   Patent: US 5892010-A 15 06-APR-1999;
FEATURES             Location/Qualifiers
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BASE COUNT        9 a      2 c      5 g      4 t
ORIGIN

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  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCA 14
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Db      4 GAATCAATGGAGCA 17


RESULT 12
AX294189/c
LOCUS       AX294189                 20 bp    DNA     linear   PAT 21-NOV-2001
DEFINITION  Sequence 5951 from Patent WO0179548.
ACCESSION   AX294189
VERSION     AX294189.1  GI:17055872
KEYWORDS    .
SOURCE      synthetic construct.
  ORGANISM  synthetic construct
            artificial sequence.
REFERENCE   1  (sites)
  AUTHORS   Barany,F., Zirvi,M., Gerry,N.P., Favis,R. and Kliman,R.
  TITLE     Method of designing addressable array for detection of nucleic acid
            sequence differences using ligase detection reaction
  JOURNAL   Patent: WO 0179548-A 5951 25-OCT-2001;
            CORNELL RESEARCH FOUNDATION, INC. (US)
FEATURES             Location/Qualifiers
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                     /db_xref="taxon:32630"
                     /note="Hypothetical Probe Sequence"
BASE COUNT        5 a      4 c      5 g      6 t
ORIGIN

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  Best Local Similarity  92.9%;  Pred. No. 1.8e+04;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCA 14
          |||||||||| |||
Db     18 GCATCAATGGCGCA 5


RESULT 13
AX289556/c
LOCUS       AX289556                 24 bp    DNA     linear   PAT 21-NOV-2001
DEFINITION  Sequence 1318 from Patent WO0179548.
ACCESSION   AX289556
VERSION     AX289556.1  GI:17051239
KEYWORDS    .
SOURCE      synthetic construct.
  ORGANISM  synthetic construct
            artificial sequence.
REFERENCE   1  (sites)
  AUTHORS   Barany,F., Zirvi,M., Gerry,N.P., Favis,R. and Kliman,R.
  TITLE     Method of designing addressable array for detection of nucleic acid
            sequence differences using ligase detection reaction
  JOURNAL   Patent: WO 0179548-A 1318 25-OCT-2001;
            CORNELL RESEARCH FOUNDATION, INC. (US)
FEATURES             Location/Qualifiers
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                     /db_xref="taxon:32630"
                     /note="Hypothetical Probe Sequence"
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ORIGIN

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  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCA 14
          |||||||||| |||
Db     22 GCATCAATGGCGCA 9


RESULT 14
AR039324/c
LOCUS       AR039324                 27 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 172 from patent US 5807743.
ACCESSION   AR039324
VERSION     AR039324.1  GI:5958687
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 27)
  AUTHORS   Stinchcomb,D.T. and McSwiggen,J.A.
  TITLE     Interleukin-2 receptor gamma-chain ribozymes
  JOURNAL   Patent: US 5807743-A 172 15-SEP-1998;
FEATURES             Location/Qualifiers
     source          1. .27
                     /organism="unknown"
BASE COUNT        7 a      5 c      8 g      6 t      1 others
ORIGIN

  Query Match            82.7%;  Score 12.4;  DB 6;  Length 27;
  Best Local Similarity  92.9%;  Pred. No. 1.7e+04;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      2 CATCAATGGAGCAC 15
          ||||| ||||||||
Db     14 CATCAGTGGAGCAC 1


RESULT 15
AR073934/c
LOCUS       AR073934                 20 bp    DNA     linear   PAT 28-AUG-2000
DEFINITION  Sequence 3 from patent US 5952229.
ACCESSION   AR073934
VERSION     AR073934.1  GI:10000694
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Monia,B.P. and Boggs,R.T.
  TITLE     Antisense oligonucleotide modulation of raf gene expression
  JOURNAL   Patent: US 5952229-A 3 14-SEP-1999;
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="unknown"
BASE COUNT        3 a      6 c      4 g      7 t
ORIGIN

  Query Match            80.0%;  Score 12;  DB 6;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 3.3e+04;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      4 TCAATGGAGCAC 15
          ||||||||||||
Db     20 TCAATGGAGCAC 9
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Search completed: October 24, 2002, 04:38:14
Job time : 519.606 secs

GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 23, 2002, 22:48:07 ; Search time 56.7273 Seconds
(without alignments)
453.992 Million cell updates/sec

Title: US-09-930-283A-3
Perfect score: 15
Sequence: 1 GCATCAATGGAGCAC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 1905168

Minimum DB seq length: 0
Maximum DB seq length: 50

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_032802:*
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24: /SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	15	100.0	15	19	AAV54043	Human antisense c-
c	2	15	100.0	15	20	AAV99435	Antisense oligonuc
c	3	15	100.0	15	21	AAZ98661	Human c-raf-1 PK t
c	4	15	100.0	15	24	AAD22797	Human c-raf-1 prot
c	5	15	100.0	20	17	AAT27527	Mouse/rat c-raf st
c	6	15	100.0	20	20	AAZ11557	Mouse and Rat c-ra
c	7	15	100.0	20	21	AAA73535	Mouse and rat a-ra
	8	13	86.7	17	20	AAV90935	Human C-raf target
c	9	13	86.7	20	17	AAT27482	Human c-raf kinase
c	10	13	86.7	20	18	AAT62145	Human c-raf and de
c	11	13	86.7	20	18	AAT59716	Human raf inhibito
c	12	13	86.7	20	20	AAZ11512	Human c-raf kinase
c	13	13	86.7	20	21	AAA73490	Human c-raf kinase
	14	12.4	82.7	20	18	AAX16583	Position FLpter 0.
	15	12.4	82.7	20	18	AAX16555	Position FLpter 0.
	16	12.4	82.7	20	19	AAV23613	Homo sapiens 20q13
c	17	12.4	82.7	20	24	ABI94231	Capture oligonucle
c	18	12.4	82.7	24	24	ABI85032	Capture oligonucle
	19	12.4	82.7	24	24	ABI85033	Capture oligonucle
c	20	12.4	82.7	27	19	AAV93971	Human IL-2 recepto
c	21	12	80.0	20	17	AAT27483	Human c-raf kinase
	22	12	80.0	20	19	AAT86617	Rat c-raf targeted
c	23	12	80.0	20	20	AAZ11513	Human c-raf kinase
	24	12	80.0	20	21	AAA92026	C-raf targeted sen
c	25	12	80.0	20	21	AAA92027	C-raf targeted ant
c	26	12	80.0	20	21	AAA73491	Human c-raf kinase
	27	11.8	78.7	21	20	AAV82744	Degenerate PCR pri
	28	11.8	78.7	29	12	AAQ12067	Initiation site of
c	29	11.8	78.7	30	18	AAT58542	Snake venom erabut
	30	11.8	78.7	33	22	AAI69852	Adeno-associated v
c	31	11.8	78.7	41	24	AAI99803	Human seryl tRNA s
c	32	11.8	78.7	41	24	AAI99804	Human seryl tRNA s
	33	11.4	76.0	20	22	AAD18428	Human estrogen rec
	34	11.4	76.0	20	22	AAC83066	Primer #2 for DNA
	35	11.4	76.0	20	22	AAC83067	Primer #1 for ampl
	36	11.4	76.0	24	21	AAA96304	PCR primer for cDN
c	37	11.4	76.0	27	19	AAV94455	Canine IL-2 recept
c	38	11.4	76.0	29	14	AAQ52122	Breast cancer spec
c	39	11.4	76.0	29	20	AAA21836	Integrin subunit b
c	40	11.4	76.0	29	21	AAF03474	Hammerhead ribozym
c	41	11.4	76.0	29	21	AAF03922	Hammerhead ribozym
c	42	11.4	76.0	31	19	AAV67945	Nucleotide fragmen
	43	11.4	76.0	32	13	AAQ27952	CA55 primer 1. Sy
	44	11.4	76.0	32	22	AAD03883	Maize CA55 promote
c	45	11.4	76.0	36	19	AAV36074	Oligonucleotide SC

ALIGNMENTS

RESULT 1
AAV54043/c
ID AAV54043 standard; DNA; 15 BP.
XX
AC AAV54043;
XX
DT 02-DEC-1998 (first entry)
XX
DE Human antisense c-raf-1 oligodeoxyribonucleotide.
XX
KW Human; antisense; c-raf-1; oligodeoxyribonucleotide; ODN/oligo;
KW tumour tissue; cancer; radiation therapy; radiosensitise; antisense;
KW liposome carrier system; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT modified_base 1
FT /*tag= a
FT /note= "N-terminal base is phosphothioated"
FT modified_base 15
FT /*tag= b
FT /note= "C-terminal base is phosphothioated"
XX
PN WO9843095-A1.
XX
PD 01-OCT-1998.
XX
PF 19-MAR-1998; 98WO-US05303.
XX
PR 24-OCT-1997; 97US-0957327.
PR 21-MAR-1997; 97US-0041192.

```
XX
PA   (GEOU ) UNIV GEORGETOWN.
XX
PI   Dritschilo A,  Gokhale P,  Kasid U,  Rahman A;
XX
DR   WPI; 1998-532155/45.
XX
PT   New cationic liposome composition containing raf
PT   oligodeoxynucleotide  - can be used to directly target tumour tissue
PT   and is useful in the radiation therapy of cancers
XX
PS   Claim 4; Page 21; 25pp; English.
XX
CC   This is the nucleotide sequence of the human antisense c-raf-1
CC   oligodeoxyribonucleotide (ODN/oligo), used in the method of the
CC   invention to directly target tumour tissue, and in cancer radiation
CC   therapy.  The products can be used in  a method of radiosensitising
CC   tumour tissue by addition of an antisense oligonucleotide of maximum
CC   40 bases containing ODN/oligo.  The liposome carrier system directly
CC   targets tumour tissue and has the potential for use in the radiation
CC   therapy of cancers.
XX
SQ   Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 19;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 29;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     15 GCATCAATGGAGCAC 1


RESULT 2
AAV99435/c
ID   AAV99435 standard; DNA; 15 BP.
XX
AC   AAV99435;
XX
DT   22-MAR-1999  (first entry)
XX
DE   Antisense oligonucleotide directed against c-raf-1 protein kinase gene.
XX
KW   Antisense oligonucleotide; human c-raf-1 protein kinase gene;
KW   phosphorothioate; phosphodiester; lipid-encapsulation; tumour;
KW   aberrant gene expression; treatment; inflammation; infection; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base    1..15
FT                    /*tag=  a
FT                    /note= "phosphorothioate or phosphodiester bonds"
XX
PN   WO9851278-A2.
XX
PD   19-NOV-1998.
XX
PF   14-MAY-1998;   98WO-CA00485.
XX
PR   14-MAY-1997;   97US-0856374.
XX
PA   (INEX-) INEX PHARM CORP.
XX
PI   Ansell SM,  Cullis P,  Debeyer D,  Harasym T,  Hope MJ;
PI   Klimuk SK,  Scherrer P,  Semple SC;
XX
DR   WPI; 1999-045179/04.
XX
PT   Composition containing lipid-encapsulated therapeutic agent -
PT   useful, e.g. for delivering antisense molecules or ribozymes or
PT   treating diseases associated with aberrant gene expression
XX
PS   Disclosure; Page 23; 98pp; English.
XX
CC   The present sequence represents an antisense oligonucleotide directed
CC   against the human c-raf-1 protein kinase gene. The oligonucleotide can
CC   have either phosphorothioate or phosphodiester bonds. The oligonucleotide
CC   is lipid-encapsulated using the method of the invention. A composition
CC   comprising lipid-encapsulated particles of a therapeutic agent,
CC   e.g. antisense oligonucleotides, is prepared by mixing at least 2 lipids
CC   with buffered aqueous solution of charged therapeutic agent to form an
CC   intermediate mixture of lipid-encapsulated particles, and changing the
CC   pH of the mixture to neutralise at least some of the external surface
CC   charges on the particles. One lipid has a (de)protonatable group with
CC   Ka such that the lipid is charged at a first pH but neutral at a second
CC   pH (particularly near physiological pH) and the buffer maintains this
CC   lipid in the charged form (i.e. cationic when the therapeutic agent is
CC   anionic in the buffer, or vice versa). The second lipid prevents particle
CC   aggregation during formation of the lipid-therapeutic agent particles.
CC   The composition is used to introduce therapeutic agents into cells,
CC   in vivo or in vitro, particularly to treat or prevent diseases associated
CC   with aberrant gene expression in mammals, specifically tumours,
CC   inflammation or infection.
XX
SQ   Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

  Query Match             100.0%;  Score 15;  DB 20;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 29;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          ||||||||||||||||
Db     15 GCATCAATGGAGCAC 1


RESULT 3
AAZ98661/c
ID   AAZ98661 standard; DNA; 15 BP.
XX
AC   AAZ98661;
XX
DT   05-JUN-2000  (first entry)
XX
DE   Human c-raf-1 PK therapeutic antisense oligonucleotide sequence ATG-AS.
XX
KW   Antisense oligonucleotide; phosphorothioate; inflammatory disease;
KW   tumour; gene therapy; aberrant gene expression; treatment;
KW   infectious disease; protein kinase C alpha; c-raf-1 protein kinase; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   misc_feature     1..15
FT                    /*tag=  a
FT                    /note= "Optionally phosphorothioate internucleotide
FT                           linkages"
XX
PN   CA2271582-A1.
XX
PD   14-NOV-1999.
XX
PF   13-MAY-1999;   99CA-2271582.
XX
PR   14-MAY-1998;   98US-0078955.
XX
PA   (KLIM/) KLIMUK S K.
PA   (HARA/) HARASYM T.
PA   (HOPE/) HOPE M J.
PA   (ANSE/) ANSELL S M.
PA   (CULL/) CULLIS P R.
PA   (MOKW/) MOK W W K.
PA   (SCHE/) SCHERRER P.
PA   (SEMP/) SEMPLE S C.
XX
```

PI Klimuk SK, Harasym T, Hope MJ, Ansell SM, Cullis PR, Mok WWK;
PI Scherrer P, Semple SC;
XX
DR WPI; 2000-225058/20.
XX
PT A method for delivering antisense oligonucleotides to cells using lipid
PT capsules comprising steric barrier lipids -
XX
PS Example 5; Page 57; 99pp; English.
XX
CC This sequence represents an antisense oligonucleotide sequence which has
CC human c-raf-1 protein kinase as its target gene. The oligonucleotide is
CC used in a method for delivering lipid encapsulated therapeutic agents
CC (i.e antisense oligonucleotides) to mammals. The lipid capsule comprises
CC steric barrier lipids that prevent particle aggregation during lipid
CC nucleic acid formation. The method may be used for the delivery of
CC therapeutic agents to mammalian cells. It is especially suitable for
CC delivering nucleic acid molecules, and in particular antisense molecules
CC which may be administered to down regulate the expression of aberrant
CC genes. The aberrant gene may be ICAM-1, c-myc, c-myb, ras, raf, erb-B-2,
CC PKC-alpha, IGF-1R, EGFR, VEGF and/or VEG-R-1. The method may be used for
CC the treatment of tumours, inflammatory diseases and/or infectious
CC diseases.
XX
SQ Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

Query Match 100.0%; Score 15; DB 21; Length 15;
Best Local Similarity 100.0%; Pred. No. 29;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GCATCAATGGAGCAC 15
||||||||||||||||
Db 15 GCATCAATGGAGCAC 1

RESULT 4
AAD22797/c
ID AAD22797 standard; DNA; 15 BP.
XX
AC AAD22797;
XX
DT 26-FEB-2002 (first entry)
XX
DE Human c-raf-1 protein kinase antisense oligonucleotide, ATG-AS.
XX
KW Treatment; tumour; lipid-therapeutic agent particle; sphingomyelin;
KW distearoylphosphatidylcholine; palmitoyloleoyl phophatidylcholine;
KW DSPC; POPC; 1,2-dioleoyl-sn-3-phosphoethanolamine; cholesterol; SM;
KW DOPE; inflammation; c-raf-1 protein kinase gene;
KW human; infectious disease; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT modified_base 1..20
FT /*tag= a
FT /mod_base= OTHER
FT /note= "Optionally phosphorothioate backbone"
XX
PN US6287591-B1.
XX
PD 11-SEP-2001.
XX
PF 14-MAY-1998; 98US-0078954.
XX
PR 14-MAY-1997; 97US-0856374.
XX
PA (INEX-) INEX PHARM CORP.
XX
PI Semple SC, Klimuk SK, Harasym T, Hope MJ, Ansell SM, Cullis P;
PI Scherrer P, Debeyer D;
XX
DR WPI; 2002-024658/03.
XX
PT Composition useful for treatment of e.g. tumors comprises particles
PT comprising lipid portion and a charged therapeutic agent -
XX
PS Disclosure; Column 15-16; 48pp; English.
XX
CC The invention relates to a composition useful for treatment of e.g.
CC tumours. The composition comprises lipid-therapeutic agent particles
CC comprising a lipid portion and a charged therapeutic agent which is
CC encapsulated in the lipid portion. The lipid portion comprises a first
CC lipid component selected from lipids containing a protonatable or
CC deprotonatable (preferably protonatable) group that has a pKa such
CC that the lipid is in charged form at a first pH and in neutral form at
CC a second pH. The pKa of lipid component is from 4-11. The first lipid
CC component is further selected such that the charged form is cationic
CC when the therapeutic agent is anionic and vice versa; the second lipid
CC component is selected from lipids that prevent particle aggregation
CC during lipid-therapeutic agent particles formation and which exchange
CC out the lipid particle at a rate greater than PEG-CerC20; third lipid
CC component is a neutral lipid selected from distearoylphosphatidylcholine
CC (DSPC), palmitoyloleoyl phophatidylcholine (POPC), 1,2-dioleoyl-sn-3-
CC phosphoethanolamine (DOPE) or SM (sphingomyelin) and a fourth lipid
CC component which is cholesterol. Compositions of the invention are used
CC for treatment or prevention of a disease caused by aberrant expression
CC of a gene preferably ICAM-1 (Intracellular adhesion molecule-1), c-myc,
CC c-myb, ras, raf, erb-B-2, PKC-alpha (phosphokinase C-alpha), IGF-1R
CC (insulin growth factor 1-receptor), bcl-2, EGFR (epidermal growth factor
CC receptor), VEGF and VEGF-R-1 (vascular endothelial growth factor
CC receptor 1) in a mammal or by inflammations such as tumour or an
CC infectious disease. The present sequence is an antisense oligonucleotide
CC targetted to human c-raf-1 protein kinase gene.
XX
SQ Sequence 15 BP; 2 A; 4 C; 4 G; 5 T; 0 other;

Query Match 100.0%; Score 15; DB 24; Length 15;
Best Local Similarity 100.0%; Pred. No. 29;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GCATCAATGGAGCAC 15
||||||||||||||||
Db 15 GCATCAATGGAGCAC 1

RESULT 5
AAT27527/c
ID AAT27527 standard; DNA; 20 BP.
XX
AC AAT27527;
XX
DT 04-JUL-1996 (first entry)
XX
DE Mouse/rat c-raf start translation region antisense oligunucleotide.
XX
KW Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW psoriasis; restenosis; 3' untranslated region; ss.
XX
OS Synthetic.
XX
PN WO9532987-A1.
XX
PD 07-DEC-1995.
XX
PF 31-MAY-1995; 95WO-US07111.
XX
PR 31-MAY-1994; 94US-0250856.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Boggs RT, Monia BP;
XX
DR WPI; 1996-030518/03.
XX
PT Oligo:nucleotide(s) targetted to nucleic acids encoding human raf -

```
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Disclosure; Page 23; 65pp; English.
XX
CC   AAT27521-T27534 are antisense oligonucleotides against both rat and
CC   mouse c-raf kinase. They can be used for the inhibition of raf
CC   expression. The oligonucleotides (ONs) are targeted to either coding
CC   region, start signal or 5' or 3' untranslated region (UTR) mRNA
CC   encoding mouse/rat c-raf. The ONs are phosphorothioate linked. The ONs
CC   are used to inhibit expression of rat and mouse raf. The ONs can be
CC   used in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match            100.0%;  Score 15;  DB 17;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          |||||||||||||||
Db     19 GCATCAATGGAGCAC 5


RESULT 6
AAZ11557/c
ID   AAZ11557 standard; DNA; 20 BP.
XX
AC   AAZ11557;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Mouse and Rat c-raf specific antisense oligo ISIS # 10711.
XX
KW   Mouse; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf; rat; antisense; ss.
XX
OS   Synthetic.
OS   Mus sp.
OS   Rattus sp.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Disclosure; Column 15; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences Z115511-564 represent antisense oligonucleotides for mouse and
CC   rat c-raf.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match            100.0%;  Score 15;  DB 20;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          |||||||||||||||
Db     19 GCATCAATGGAGCAC 5


RESULT 7
AAA73535/c
ID   AAA73535 standard; DNA; 20 BP.
XX
AC   AAA73535;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Mouse and rat a-raf kinase antisense oligonucleotide #7 (Isis #10711).
XX
KW   c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; mouse; rat; ss.
XX
OS   Rattus rattus.
OS   Mus sp.
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis
XX
PS   Disclosure; Column 14; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to mouse and rat c-raf genes, resulting in c-raf
CC   expression inhibition. The present sequence may be useful for treating
CC   and raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 4 A; 4 C; 5 G; 7 T; 0 other;

  Query Match            100.0%;  Score 15;  DB 21;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 30;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          |||||||||||||||
Db     19 GCATCAATGGAGCAC 5
```

```
RESULT 8
AAV90935
ID   AAV90935 standard; RNA; 17 BP.
XX
AC   AAV90935;
XX
DT   18-FEB-1999  (first entry)
XX
DE   Human C-raf target site nucleotide position 128.
XX
KW   Human; c-raf; A-raf; B-raf; hammerhead ribozyme; hairpin ribozyme;
KW   target; substrate; catalyst; modulation; expression; Raf gene;
KW   delivery; screening; identification; synthesis; deprotection;
KW   purification; cancer; inflammation; psoriasis; non-hepatic ascites;
KW   infection; genetic drift; restenosis; rheumatoid arthritis; ss.
XX
OS   Homo sapiens.
XX
PN   WO9850530-A2.
XX
PD   12-NOV-1998.
XX
PF   05-MAY-1998;   98WO-US09249.
XX
PR   19-DEC-1997;   97US-0068212.
PR   09-MAY-1997;   97US-0046059.
PR   09-JUN-1997;   97US-0049002.
PR   03-JUL-1997;   97US-0051718.
PR   22-AUG-1997;   97US-0056808.
PR   02-OCT-1997;   97US-0061321.
PR   02-OCT-1997;   97US-0061324.
PR   05-NOV-1997;   97US-0064866.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Beaudry A, Beigelman L, Bellon L, Burgin A, Jarvis T;
PI   Karpeisky A, Kisich K, Matulic-Adamic J, McSwiggen JA;
PI   Parry T, Reynolds M, Sweedler D, Thompson J, Workman CT;
XX
DR   WPI; 1999-009494/01.
XX
PT   Identifying new catalytic nucleic acid that modulates selected
PT   processes - especially ribozymes that cleave Raf RNA for treating
PT   cancer, restenosis, and also new ribozymes and modified nucleoside
PT   triphosphates used as antiviral agents and synthons
XX
PS   Claim 177; Page 146; 259pp; English.
XX
CC   A method has been developed for the identification of a nucleic acid
CC   capable of modulating a process in a biological system. The method
CC   comprises: (a) introducing into the system a random library of nucleic
CC   acid catalysts (NAC) having a substrate binding domain (SBD), comprising
CC   a random sequence, and a catalytic domain (CD); and (b) identifying NAC
CC   in systems where modulation has occurred and/or determining the sequence
CC   of at least part of the SBDs in such systems. Nucleic acid molecules
CC   with endonuclease activity and catalytic activity, from the present
CC   invention, are used to modulate gene expression in plant and mammalian
CC   cells and to cleave target nucleic acid, particularly for treating
CC   systemic diseases caused by specific RNA, e.g. cancer, inflammation,
CC   psoriasis, non-hepatic ascites and infection. They may also be used to
CC   detect genetic drift and mutations in diseased cells and to determine
CC   c-raf RNA. Specifically NACs with RNA-cleaving activity that modulate
CC   expression of the Raf gene, are used to treat cancer, restenosis,
CC   psoriasis or rheumatoid arthritis, or generally any condition associated
CC   with the level of c-raf. Introduction of sugar/phosphate modifications
CC   increases stability against nuclease and activity. AAV90922 to AAV93877
CC   represent NACs that can be used in the method, specifically for
CC   modulating the expression of a Raf gene.
XX
SQ   Sequence 17 BP; 5 A; 4 C; 5 G; 3 U; 0 other;

  Query Match             86.7%;  Score 13;  DB 20;  Length 17;
  Best Local Similarity   84.6%;  Pred. No. 4.2e+02;
  Matches   11;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||:|||:|||||
Db       5 GCAUCAAUGGAGC 17


RESULT 9
AAT27482/c
ID   AAT27482 standard; DNA; 20 BP.
XX
AC   AAT27482;
XX
DT   04-JUL-1996  (first entry)
XX
DE   Human c-raf kinase translation start site antisense oligonucleotide.
XX
KW   Antisense; anti-proliferative; tumour; cancer; raf; oncogene;
KW   phosphorothioate; 2' sugar modification; psoriasis; restenosis; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..20
FT                   /*tag=  a
FT                   /note= "opt. phosphorothioate linked"
FT   misc_feature    1..20
FT                   /*tag=  b
FT                   /note= "all bases opt. contain 2'-O-methyl
FT                          or 2'-O-propyl sugar modifications"
XX
PN   WO9532987-A1.
XX
PD   07-DEC-1995.
XX
PF   31-MAY-1995;   95WO-US07111.
XX
PR   31-MAY-1994;   94US-0250856.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1996-030518/03.
XX
PT   Oligo:nucleotide(s) targetted to nucleic acids encoding human raf  -
PT   capable of inhibiting raf expression, used in treatment of
PT   hyper:proliferative disorders
XX
PS   Claim 10; Page 15; 65pp; English.
XX
CC   AAT27481-T27507 are human c-raf kinase antisense oligonucleotides used
CC   for the inhibition of raf expression. The oligonucleotides (ONs) are
CC   targeted to either coding region, start or stop signal or 5' or 3'
CC   untranslated region (UTR) mRNA encoding human c-raf. The ONs may be
CC   phosphorothioate linked and may contain modifications at the 2'
CC   position of the sugar moiety. ONs are pref. complementary to either
CC   3' or 5' UTRs, phosphorothioate linked and contain 2'-O-alkyl sugar
CC   modifications. The ONs are used to inhibit expression of human raf
CC   in partic. in conditions associated with hyperproliferation e.g.
CC   cancer, restenosis, and psoriasis.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 17;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||||||||||||
Db      13 GCATCAATGGAGC 1
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```
RESULT 10
AAT62145/c
ID   AAT62145 standard; DNA; 20 BP.
XX
AC   AAT62145;
XX
DT   01-DEC-1997  (first entry)
XX
DE   Human c-raf and dextran sulphate mRNA targetting oligonucleotide ON1.
XX
KW   Cancer; anionic polysaccharide; human; lung cancer; stomach cancer;
KW   renal cancer; breast cancer; laryngeal cancer; pancreatic cancer;
KW   colorectal cancer; malignant melanoma; tumour; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..20
FT                   /*tag=  a
FT                   /note= "Phosphorothioate backbone; optionally being
FT                          uniformly substituted at the 2'-position of the
FT                          sugar moiety by a methoxy group"
XX
PN   WO9710829-A1.
XX
PD   27-MAR-1997.
XX
PF   12-SEP-1996;   96WO-GB02245.
XX
PR   19-SEP-1995;   95GB-0019109.
XX
PA   (NOVS ) NOVARTIS AG.
PA   (CIBA ) CIBA GEIGY AG.
XX
PI   Nicklin PL,  Steward A;
XX
DR   WPI; 1997-202610/18.
XX
PT   Composition for cancer treatment  - comprising anionic
PT   polysaccharide, and oligo:nucleotide targeted to mRNA encoding
PT   human c-raf and dextran sulphate
XX
PS   Claim 16; Page 14; 21pp; English.
XX
CC   A pharmaceutical composition has been developed comprising an
CC   oligonucleotide, targeted to human raf encoding mRNA, and an anionic
CC   polysaccharide. The present sequence represents a specifically claimed
CC   oligonucleotide for use in the composition. The composition can be
CC   used to treat mammalian cancer, especially human lung, stomach, renal,
CC   breast, laryngeal, pancreatic or colorectal cancer, or malignant
CC   melanoma. The anionic polysaccharide increases tumour uptake of the
CC   oligonucleotide, particularly an oligonucleotide targeted to human raf
CC   encoding mRNA.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 18;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||||||||||||
Db      13 GCATCAATGGAGC 1


RESULT 11
AAT59716/c
ID   AAT59716 standard; DNA; 20 BP.
XX
AC   AAT59716;
XX
DT   06-OCT-1997  (first entry)
XX
DE   Human raf inhibitor oligonucleotide ON1.
XX
KW   raf; inhibitor; antisense; liposome; cancer; abnormal expression;
KW   anti-hyperproliferative; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag=  a
FT                   /note= "phosphorothioate backbone linkages"
XX
PN   WO9704787-A1.
XX
PD   13-FEB-1997.
XX
PF   24-JUL-1996;   96WO-GB01775.
XX
PR   19-SEP-1995;   95GB-0019130.
PR   01-AUG-1995;   95GB-0015743.
XX
PA   (CIBA ) CIBA GEIGY AG.
XX
PI   Hamilton KO,  Love WG,  Nicklin PL,  Phillips JA;
XX
DR   WPI; 1997-145363/13.
XX
PT   Inhibiting human raf expression, partic. for treating cancer  -
PT   using an oligonucleotide targeted to mRNA encoding human raf
PT   entrapped in sterically stabilised liposome(s)
XX
PS   Claim 16; Page 18; 27pp; English.
XX
CC   T59716-28 are preferred oligonucleotides which are targeted to mRNA
CC   encoding human raf and are capable of inhibiting raf expression.
CC   Compositions containing the oligonucleotides entrapped in sterically
CC   stabilised liposomes are claimed. The compsns. can be used for inhibiting
CC   the expression of human raf. They can be used for the treatment of
CC   mammalian cancer, partic. human cancer e.g. lung, stomach, renal, breast,
CC   laryngeal, pancreatic, colorectal cancer and malignant melanoma. In
CC   particular the compsns. can inhibit abnormal raf expression and retain
CC   anti-hyperproliferative activity after prolonged circulation in the
CC   bloodstream. They facilitate the reduction of accumulation of ONs in
CC   non-target organs and a reduction of acute and chronic side effects
CC   during prolonged treatment. ON1-10 are oligodeoxynucleotides with
CC   phosphorothioate backbones designed using the Genbank c-raf sequence
CC   HUMRAFR. ON1 is targeted to the translation initiation site.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 18;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||||||||||||
Db      13 GCATCAATGGAGC 1


RESULT 12
AAZ11512/c
ID   AAZ11512 standard; DNA; 20 BP.
XX
AC   AAZ11512;
XX
DT   05-NOV-1999  (first entry)
XX
DE   Human c-raf kinase antisense oligo ISIS # 5074.
XX
KW   Human; raf; diagnosis; abnormal proliferative state; hyperproliferation;
KW   cancer; psoriasis; blood vessel restenosis; c-raf kinase; antisense; ss.
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XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   US5952229-A.
XX
PD   14-SEP-1999.
XX
PF   26-NOV-1996;   96US-0756806.
XX
PR   26-NOV-1996;   96US-0756806.
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 1999-527018/44.
XX
PT   Oligonucleotides targeted to human raf mRNA useful for treating and
PT   diagnosing abnormal proliferative states and inhibiting raf
PT   expression
XX
PS   Claim 1; Column 9; 29pp; English.
XX
CC   The invention provides antisense oligonucleotides targeted to mRNA
CC   encoding human raf and capable of inhibiting raf expression. The
CC   antisense oligonucleotides are useful for treating and diagnosing
CC   abnormal proliferative states and hyperproliferation (e.g. cancer,
CC   psoriasis, or blood vessel restenosis), and inhibiting raf expression.
CC   Sequences AAZ11511-537 and AAZ11565-573 represent antisense
CC   oligonucleotides for human c-raf kinase.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 20;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||||||||||||
Db      13 GCATCAATGGAGC 1


RESULT 13
AAA73490/c
ID   AAA73490 standard; DNA; 20 BP.
XX
AC   AAA73490;
XX
DT   28-NOV-2000  (first entry)
XX
DE   Human c-raf kinase antisense oligonucleotide #2 (Isis #5074,#7835,#7843).
XX
KW   Human; c-raf; protein kinase; antisense oligonucleotide; cancer;
KW   signal transduction; hyperplasia; pulmonary fibrosis; angiogenesis;
KW   psoriasis; atherosclerosis; smooth muscle cell proliferation; stenosis;
KW   restenosis; inflammatory disorder; tissue graft rejection;
KW   endotoxin shock; glomerular nephritis; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag= a
FT                   /mod_base= OTHER
FT                   /note= "All or some nucleotides are optionally with
FT                   2'-methoxyethoxy, or 2'-O-propyl modification. Also,
FT                   optionally phosphodiester or phosphothioate backbone"
XX
PN   US6090626-A.
XX
PD   18-JUL-2000.
XX
PF   28-AUG-1998;   98US-0143214.
XX
PR   31-MAY-1994;   94US-0250856.
PR   31-MAY-1995;   95WO-US07111.
PR   26-NOV-1996;   96US-0756806.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Boggs RT,  Monia BP;
XX
DR   WPI; 2000-531424/48.
XX
PT   Antisense oligonucleotides targeted to nucleic acid molecule encoding
PT   human raf useful for diagnosis, treatment of raf-associated cell
PT   proliferative conditions such as cancer, psoriasis or blood vessel
PT   restenosis  -
XX
PS   Claim 31; Column 9; 31pp; English.
XX
CC   c-raf is a serine-threonine-specific protein kinase and is thought to
CC   play a fundamental role in signal transduction, and cell proliferation
CC   control. The present sequence is an antisense oligonucleotide. This
CC   sequence is targeted to human c-raf gene, resulting in c-raf expression
CC   inhibition. The present sequence may be useful for treating and
CC   raf-associated cell hyperproliferation conditions such as cancer,
CC   hyperplasias, pulmonary fibrosis, angiogenesis, psoriasis,
CC   atherosclerosis and smooth muscle cell proliferation in blood vessels
CC   e.g. stenosis or restenosis following angioplasty. Also, the present
CC   sequence may be useful for treating inflammatory disorders such as tissue
CC   graft rejection, endotoxin shock and glomerular nephritis.
XX
SQ   Sequence 20 BP; 5 A; 5 C; 4 G; 6 T; 0 other;

  Query Match             86.7%;  Score 13;  DB 21;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
           |||||||||||||
Db      13 GCATCAATGGAGC 1


RESULT 14
AAX16583
ID   AAX16583 standard; DNA; 20 BP.
XX
AC   AAX16583;
XX
DT   26-APR-1999  (first entry)
XX
DE   Position FLpter 0.825 chromosome abnormality PCR forward primer #18.
XX
KW   Human chromosome 20; position FLpter 0.825; chromosome abnormality;
KW   PCR primer; probe; hybridisation; detection; breast cancer; tumour;
KW   ovary; bladder; head; neck; colon; comparative genome hybridisation; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9714811-A1.
XX
PD   24-APR-1997.
XX
PF   07-OCT-1996;   96WO-US16085.
XX
PR   20-OCT-1995;   95US-0546130.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Collins C,  Gray JW,  Kallioniemi O,  Pinkel D,  Tanner MM;
XX
```

DR WPI; 1997-245126/22.
XX
PT Detection of abnormalities on human chromosome 20 at position 20q13
PT - is useful as indicator of presence of, e.g. primary breast tumours
XX
PS Claim 2; Page 15; 40pp; English.
XX
CC A method has been developed for detecting chromosomal abnormalities at
CC about position FLpter 0.825 on the human chromosome 20. The method
CC comprises: (i) contacting a chromosomal sample from a patient with at
CC least 1 labelled probe, which binds to a target sequence at about
CC position FLpter 0.825 on the human chromosome 20; and (ii) detecting the
CC binding of the probes to the target sequence. AAX16549 to AAX16586
CC represent nucleic acid sequences to which the probes can hybridise. These
CC nucleic acid sequences also represent PCR primers. The probes and method
CC can be used to detect genomic amplifications in the 20q13 (especially
CC the 20q13.2) amplicon, which is associated and indicative of the presence
CC of a large number of cancers, e.g. primary tumours of breast, ovary,
CC bladder, head and neck and colon cancers. The method uses the technique
CC of comparative genome hybridisation (CGH) which is able to reveal
CC amplifications and deletions in genomic chromosomes irrespective of
CC genome rearrangements. However CGH also provides a more quantitative
CC estimate of copy number than, e.g. Southern hybridisation, and also
CC provides the localisation of the amplified or deleted region in a normal
CC chromosome. Fluorescent in situ hybridisation was further performed
CC using locus specific probes to confirm the CGH data and to precisely
CC map the region of the amplification.
XX
SQ Sequence 20 BP; 9 A; 2 C; 5 G; 4 T; 0 other;

Query Match 82.7%; Score 12.4; DB 18; Length 20;
Best Local Similarity 92.9%; Pred. No. 9.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GCATCAATGGAGCA 14
| ||||||||||||
Db 4 GAATCAATGGAGCA 17

RESULT 15
AAX16555
ID AAX16555 standard; DNA; 20 BP.
XX
AC AAX16555;
XX
DT 26-APR-1999 (first entry)
XX
DE Position FLpter 0.825 chromosome abnormality PCR forward primer #4.
XX
KW Human chromosome 20; position FLpter 0.825; chromosome abnormality;
KW PCR primer; probe; hybridisation; detection; breast cancer; tumour;
KW ovary; bladder; head; neck; colon; comparative genome hybridisation; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9714811-A1.
XX
PD 24-APR-1997.
XX
PF 07-OCT-1996; 96WO-US16085.
XX
PR 20-OCT-1995; 95US-0546130.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Collins C, Gray JW, Kallioniemi O, Pinkel D, Tanner MM;
XX
DR WPI; 1997-245126/22.
XX
PT Detection of abnormalities on human chromosome 20 at position 20q13
PT - is useful as indicator of presence of, e.g. primary breast tumours
XX
PS Claim 2; Page 14; 40pp; English.
XX
CC A method has been developed for detecting chromosomal abnormalities at
CC about position FLpter 0.825 on the human chromosome 20. The method
CC comprises: (i) contacting a chromosomal sample from a patient with at
CC least 1 labelled probe, which binds to a target sequence at about
CC position FLpter 0.825 on the human chromosome 20; and (ii) detecting the
CC binding of the probes to the target sequence. AAX16549 to AAX16586
CC represent nucleic acid sequences to which the probes can hybridise. These
CC nucleic acid sequences also represent PCR primers. The probes and method
CC can be used to detect genomic amplifications in the 20q13 (especially
CC the 20q13.2) amplicon, which is associated and indicative of the presence
CC of a large number of cancers, e.g. primary tumours of breast, ovary,
CC bladder, head and neck and colon cancers. The method uses the technique
CC of comparative genome hybridisation (CGH) which is able to reveal
CC amplifications and deletions in genomic chromosomes irrespective of
CC genome rearrangements. However CGH also provides a more quantitative
CC estimate of copy number than, e.g. Southern hybridisation, and also
CC provides the localisation of the amplified or deleted region in a normal
CC chromosome. Fluorescent in situ hybridisation was further performed
CC using locus specific probes to confirm the CGH data and to precisely
CC map the region of the amplification.
XX
SQ Sequence 20 BP; 9 A; 2 C; 5 G; 4 T; 0 other;

Query Match 82.7%; Score 12.4; DB 18; Length 20;
Best Local Similarity 92.9%; Pred. No. 9.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GCATCAATGGAGCA 14
| ||||||||||||
Db 4 GAATCAATGGAGCA 17

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Job time : 56.7273 secs

GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 24, 2002, 01:05:22 ; Search time 20.4545 Seconds
(without alignments)
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Perfect score: 15
Sequence: 1 GCATCAATGGAGCAC 15

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 543772

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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c	1	15	100.0	15	3	US-08-957-327-1	Sequence 1, Appli
	2	15	100.0	15	3	US-08-957-327-3	Sequence 3, Appli
c	3	15	100.0	15	4	US-09-078-954-15	Sequence 15, Appl
c	4	15	100.0	15	4	US-09-482-084-1	Sequence 1, Appli
	5	15	100.0	15	4	US-09-482-084-3	Sequence 3, Appli
c	6	15	100.0	20	2	US-08-756-806A-47	Sequence 47, Appl
c	7	15	100.0	20	3	US-09-143-214-47	Sequence 47, Appl
c	8	15	100.0	20	5	PCT-US95-07111A-47	Sequence 47, Appl
c	9	15	100.0	25	3	US-08-957-327-2	Sequence 2, Appli
c	10	15	100.0	25	4	US-09-482-084-2	Sequence 2, Appli
c	11	13	86.7	20	1	US-08-250-856A-2	Sequence 2, Appli
c	12	13	86.7	20	2	US-08-756-806A-2	Sequence 2, Appli
c	13	13	86.7	20	3	US-09-143-214-2	Sequence 2, Appli
c	14	13	86.7	20	3	US-09-000-136-1	Sequence 1, Appli
c	15	13	86.7	20	5	PCT-US95-07111A-2	Sequence 2, Appli
	16	12.4	82.7	20	1	US-08-546-130A-7	Sequence 7, Appli
	17	12.4	82.7	20	2	US-08-680-395-15	Sequence 15, Appl
	18	12.4	82.7	20	4	US-09-066-641-4	Sequence 4, Appli
	19	12.4	82.7	20	4	US-09-066-641-18	Sequence 18, Appl
c	20	12.4	82.7	27	1	US-08-758-306-172	Sequence 172, App
c	21	12	80.0	20	1	US-08-250-856A-3	Sequence 3, Appli
c	22	12	80.0	20	2	US-08-756-806A-3	Sequence 3, Appli
c	23	12	80.0	20	3	US-09-143-214-3	Sequence 3, Appli
	24	12	80.0	20	3	US-08-870-608-5	Sequence 5, Appli
c	25	12	80.0	20	3	US-08-870-608-6	Sequence 6, Appli
c	26	12	80.0	20	5	PCT-US95-07111A-3	Sequence 3, Appli
	27	11.8	78.7	27	2	US-08-467-963C-12	Sequence 12, Appl
	28	11.8	78.7	27	2	US-08-838-189D-12	Sequence 12, Appl
	29	11.8	78.7	27	3	US-08-852-344D-12	Sequence 12, Appl
	30	11.8	78.7	27	3	US-08-344-639E-12	Sequence 12, Appl
	31	11.8	78.7	27	4	US-08-467-969A-12	Sequence 12, Appl
	32	11.8	78.7	27	4	US-08-467-961A-12	Sequence 12, Appl
	33	11.8	78.7	27	4	US-08-001-554A-12	Sequence 12, Appl
c	34	11.8	78.7	30	2	US-08-673-312-8	Sequence 8, Appli
	35	11.4	76.0	20	3	US-08-790-659-4	Sequence 4, Appli
	36	11.4	76.0	20	3	US-08-790-659-5	Sequence 5, Appli
c	37	11.4	76.0	27	1	US-08-758-306-1140	Sequence 1140, Ap
c	38	11.4	76.0	29	1	US-08-435-350-83	Sequence 83, Appl
	39	11.4	76.0	32	1	US-08-104-073-14	Sequence 14, Appl
c	40	11.4	76.0	36	4	US-09-254-733-48	Sequence 48, Appl
c	41	11	73.3	20	2	US-08-756-806A-48	Sequence 48, Appl
c	42	11	73.3	20	3	US-09-143-214-48	Sequence 48, Appl
c	43	11	73.3	20	5	PCT-US95-07111A-48	Sequence 48, Appl
	44	11	73.3	26	1	US-08-485-602-4	Sequence 4, Appli
c	45	11	73.3	26	1	US-08-485-602-80	Sequence 80, Appl

ALIGNMENTS

```
RESULT 1
US-08-957-327-1/c
; Sequence 1, Application US/08957327
; Patent No. 6126965
;  GENERAL INFORMATION:
;    APPLICANT:  Kasid, Usha
;    APPLICANT:  Gokhale, Prafulla
;    APPLICANT:  Dritschilo, Anatoly
;    APPLICANT:  Rahman, Aqulur
;    TITLE OF INVENTION:  Liposomes contaiing Oligonucelotides
;    NUMBER OF SEQUENCES:  3
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hendricks and Assoc.
;      STREET:  P.O. Box 2509
;      CITY:  Fairfax
;      STATE:  VA
;      COUNTRY:  US
;      ZIP:  22031
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/957,327
;      FILING DATE:  24-OCT-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hendricks, Glenna
;      REGISTRATION NUMBER:  32,535
;      REFERENCE/DOCKET NUMBER:  kasid
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 591-4470
;      TELEFAX:  (703) 591-4428
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  YES
US-08-957-327-1

  Query Match             100.0%;  Score 15;  DB 3;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
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          ||||||||||||||||
Db      15 GCATCAATGGAGCAC 1


RESULT 2
US-08-957-327-3
; Sequence 3, Application US/08957327
; Patent No. 6126965
;  GENERAL INFORMATION:
;    APPLICANT:  Kasid, Usha
;    APPLICANT:  Gokhale, Prafulla
;    APPLICANT:  Dritschilo, Anatoly
;    APPLICANT:  Rahman, Aqulur
;    TITLE OF INVENTION:  Liposomes contaiing Oligonucelotides
;    NUMBER OF SEQUENCES:  3
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hendricks and Assoc.
;      STREET:  P.O. Box 2509
;      CITY:  Fairfax
;      STATE:  VA
;      COUNTRY:  US
;      ZIP:  22031
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/957,327
;      FILING DATE:  24-OCT-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hendricks, Glenna
;      REGISTRATION NUMBER:  32,535
;      REFERENCE/DOCKET NUMBER:  kasid
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 591-4470
;      TELEFAX:  (703) 591-4428
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  YES
US-08-957-327-3

  Query Match             100.0%;  Score 15;  DB 3;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           ||||||||||||||||
Db       1 GCATCAATGGAGCAC 15


RESULT 3
US-09-078-954-15/c
; Sequence 15, Application US/09078954
; Patent No. 6287591
;  GENERAL INFORMATION:
;    APPLICANT:  SEMPLE, Sean C.
;    APPLICANT:  Klimuk, Sandra K.
;    APPLICANT:  Harasym, Troy
;    APPLICANT:  Hope, Michael J.
;    APPLICANT:  Ansell, Steven M.
;    APPLICANT:  Cullis, Pieter
;    APPLICANT:  Scherrer, Peter
;    APPLICANT:  Geiser, Timothy
;    APPLICANT:  Zon, Gerald
;    APPLICANT:  Debeyer, Dan
;    TITLE OF INVENTION:  High Efficiency Encapsulation of Charged Therapeutic Agents
;    TITLE OF INVENTION:  Lipid Vesicles
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oppedahl & Larson
;      STREET:  PO Box 5270
;      CITY:  Frisco
;      STATE:  CO
;      COUNTRY:  USA
;      ZIP:  80443-5270
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 Mb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS 5.0
;      SOFTWARE:  Word Perfect
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/078,954
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/856,374
;      FILING DATE:  14-MAY-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Marina T. Larson
;      REGISTRATION NUMBER:  32,038
;      REFERENCE/DOCKET NUMBER:  INEX.P-003
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (970) 668-2050
;      TELEFAX:  (970) 668-2082
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
;    HYPOTHETICAL:  no
;    ANTI-SENSE:  yes
US-09-078-954-15

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           ||||||||||||||||
Db      15 GCATCAATGGAGCAC 1


RESULT 4
US-09-482-084-1/c
; Sequence 1, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
```

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;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 1:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 15 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-482-084-1

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           |||||||||||||||
Db      15 GCATCAATGGAGCAC 1


RESULT 5
US-09-482-084-3
; Sequence 3, Application US/09482084
; Patent No. 6333314
;   GENERAL INFORMATION:
;        APPLICANT: Kasid, Usha
;                   Gokhale, Prafulla
;                   Dritschilo, Anatoly
;                   Rahman, Aqulur
;        TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;        NUMBER OF SEQUENCES: 3
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hendricks and Assoc.
;             STREET: P.O. Box 2509
;             CITY: Fairfax
;             STATE: VA
;             COUNTRY: US
;             ZIP: 22031
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/482,084
;             FILING DATE: 13-Jan-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/957,327
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Hendricks, Glenna
;             REGISTRATION NUMBER: 32,535
;             REFERENCE/DOCKET NUMBER: kasid
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (703) 591-4470
;             TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 3:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 15 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: unknown
;        MOLECULE TYPE: DNA (genomic)
;        HYPOTHETICAL: NO
;        ANTI-SENSE: YES
;        SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-482-084-3

  Query Match             100.0%;  Score 15;  DB 4;  Length 15;
  Best Local Similarity   100.0%;  Pred. No. 4.3;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           |||||||||||||||
Db       1 GCATCAATGGAGCAC 15


RESULT 6
US-08-756-806A-47/c
; Sequence 47, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/756,806A
;      FILING DATE:  No. 5952229ember 26, 1996
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-756-806A-47

  Query Match             100.0%;  Score 15;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           |||||||||||||||
```

```
Db      19 GCATCAATGGAGCAC 5


RESULT 7
US-09-143-214-47/c
; Sequence 47, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/143,214
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/756,806
;      FILING DATE:  No. 6090626ember 26, 1996
;      APPLICATION NUMBER:  PCT/US95/07111
;      FILING DATE:  May 31, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0200
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-09-143-214-47

  Query Match             100.0%;  Score 15;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           |||||||||||||||
Db      19 GCATCAATGGAGCAC 5


RESULT 8
PCT-US95-07111A-47/c
; Sequence 47, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  47:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-47

  Query Match             100.0%;  Score 15;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGCAC 15
           |||||||||||||||
Db      19 GCATCAATGGAGCAC 5


RESULT 9
US-08-957-327-2/c
; Sequence 2, Application US/08957327
; Patent No. 6126965
;  GENERAL INFORMATION:
;    APPLICANT:  Kasid, Usha
;    APPLICANT:  Gokhale, Prafulla
;    APPLICANT:  Dritschilo, Anatoly
;    APPLICANT:  Rahman, Aqulur
;    TITLE OF INVENTION:  Liposomes contaiing Oligonucelotides
;    NUMBER OF SEQUENCES:  3
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Hendricks and Assoc.
;      STREET:  P.O. Box 2509
;      CITY:  Fairfax
;      STATE:  VA
;      COUNTRY:  US
;      ZIP:  22031
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/957,327
;      FILING DATE:  24-OCT-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hendricks, Glenna
;      REGISTRATION NUMBER:  32,535
;      REFERENCE/DOCKET NUMBER:  kasid
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 591-4470
```

```
;      TELEFAX:  (703) 591-4428
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  25 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  YES
US-08-957-327-2

  Query Match            100.0%;  Score 15;  DB 3;  Length 25;
  Best Local Similarity  100.0%;  Pred. No. 4.7;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          |||||||||||||||
Db     22 GCATCAATGGAGCAC 8


RESULT 10
US-09-482-084-2/c
; Sequence 2, Application US/09482084
; Patent No. 6333314
;  GENERAL INFORMATION:
;       APPLICANT: Kasid, Usha
;                  Gokhale, Prafulla
;                  Dritschilo, Anatoly
;                  Rahman, Aqulur
;       TITLE OF INVENTION: Liposomes contaiing Oligonucelotides
;       NUMBER OF SEQUENCES: 3
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Hendricks and Assoc.
;            STREET: P.O. Box 2509
;            CITY: Fairfax
;            STATE: VA
;            COUNTRY: US
;            ZIP: 22031
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/482,084
;            FILING DATE: 13-Jan-2000
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: 08/957,327
;            FILING DATE: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Hendricks, Glenna
;            REGISTRATION NUMBER: 32,535
;            REFERENCE/DOCKET NUMBER: kasid
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (703) 591-4470
;            TELEFAX: (703) 591-4428
;   INFORMATION FOR SEQ ID NO: 2:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 25 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: unknown
;       MOLECULE TYPE: DNA (genomic)
;       HYPOTHETICAL: NO
;       ANTI-SENSE: YES
;       SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-482-084-2

  Query Match            100.0%;  Score 15;  DB 4;  Length 25;
  Best Local Similarity  100.0%;  Pred. No. 4.7;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGCAC 15
          |||||||||||||||
Db     22 GCATCAATGGAGCAC 8


RESULT 11
US-08-250-856A-2/c
; Sequence 2, Application US/08250856A
; Patent No. 5563255
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  39
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/250,856A
;      FILING DATE:  May 31, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0094
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
US-08-250-856A-2

  Query Match             86.7%;  Score 13;  DB 1;  Length 20;
  Best Local Similarity  100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
          |||||||||||||
Db     13 GCATCAATGGAGC 1


RESULT 12
US-08-756-806A-2/c
; Sequence 2, Application US/08756806A
; Patent No. 5952229
;  GENERAL INFORMATION:
;    APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;    TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  66 East Main Street
;      CITY:  Marlton
;      STATE:  NJ
```

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;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/756,806A
;       FILING DATE:  No. 5952229ember 26, 1996
;       CLASSIFICATION:  536
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-08-756-806A-2

  Query Match             86.7%;  Score 13;  DB 2;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
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Db     13 GCATCAATGGAGC 1


RESULT 13
US-09-143-214-2/c
; Sequence 2, Application US/09143214
; Patent No. 6090626
;  GENERAL INFORMATION:
;     APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;     TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
;     TITLE OF INVENTION:  of raf Gene Expression
;     NUMBER OF SEQUENCES:  65
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Law Offices of Jane Massey Licata
;       STREET:  66 East Main Street
;       CITY:  Marlton
;       STATE:  NJ
;       COUNTRY:  USA
;       ZIP:  08053
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;       COMPUTER:  IBM PS/2
;       OPERATING SYSTEM:  PC-DOS
;       SOFTWARE:  WORDPERFECT 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/143,214
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/756,806
;       FILING DATE:  No. 6090626ember 26, 1996
;       APPLICATION NUMBER:  PCT/US95/07111
;       FILING DATE:  May 31, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/250,856
;       FILING DATE:  May 31, 1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Jane Massey Licata
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0200
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (609) 779-2400
;       TELEFAX:  (609) 810-1454
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-09-143-214-2

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  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
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Db     13 GCATCAATGGAGC 1


RESULT 14
US-09-000-136-1/c
; Sequence 1, Application US/09000136
; Patent No. 6096720
; GENERAL INFORMATION:
;  APPLICANT: Love, William G
;  APPLICANT: Sharman, Thomas
;  APPLICANT: Phillips, Judith A
;  APPLICANT: Nicklin, Paul L
;  APPLICANT: Hamilton, Karen O
;  TITLE OF INVENTION: Liposomal Oligonucleotide Compositions
;  FILE REFERENCE: 4-20536/A/MA 2112
;  CURRENT APPLICATION NUMBER: US/09/000,136
;  CURRENT FILING DATE: 1998-04-23
;  EARLIER APPLICATION NUMBER: GB 9515743.4
;  EARLIER FILING DATE: 1995-08-01
;  NUMBER OF SEQ ID NOS: 25
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:oligonucleotide
;   FEATURE:
;   OTHER INFORMATION: phosphorothioate backbones
;   FEATURE:
;   OTHER INFORMATION: alternative oligonucleotide prepared with methoxy
;   OTHER INFORMATION: group substituting 2' sugar moiety
US-09-000-136-1

  Query Match             86.7%;  Score 13;  DB 3;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GCATCAATGGAGC 13
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Db     13 GCATCAATGGAGC 1


RESULT 15
PCT-US95-07111A-2/c
; Sequence 2, Application PC/TUS9507111A
;  GENERAL INFORMATION:
;     APPLICANT:  Monia, Brett P. and Boggs, Russell T.
;     TITLE OF INVENTION:  Antisense Oligonucleotide Modulation
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;    TITLE OF INVENTION:  of raf Gene Expression
;    NUMBER OF SEQUENCES:  54
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Law Offices of Jane Massey Licata
;      STREET:  210 Lake Drive East, Suite 201
;      CITY:  Cherry Hill
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08002
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM PS/2
;      OPERATING SYSTEM:  PC-DOS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07111A
;      FILING DATE:  May 31, 1995
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/250,856
;      FILING DATE:  May 31, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0135
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 779-8488
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  Nucleic Acid
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  Yes
PCT-US95-07111A-2

  Query Match             86.7%;  Score 13;  DB 5;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 63;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GCATCAATGGAGC 13
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Db      13 GCATCAATGGAGC 1


Search completed: October 24, 2002, 06:24:45
Job time : 20.4545 secs
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